

EXHIBIT A

Filed: December 4, 2001 Express Mail: EL603009481US

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continuation patent application identified as follows:

Jc872 U.S. PTO
10/004571
12/04/01

APPLICANT: Danishefsky, et al.

TITLE: Synthesis of Epothilones, Intermediates Thereto, Analogues and Uses
Thereof

Application Comprising: 112 pages (including 87 pages of description, 24 pages of
claims, and 1 page of Abstract);
and 59 sheets of drawings;

Using: Utility Patent Application Transmittal (5 pp.);
Fee Transmittal (1 pg., 2 copies); Preliminary Amendment (11 pp.);
Identification of Patent Under 37 CFR §1.607(c) (1 pg.); Statement Filed Pursuant to
Duty of Disclosure Under 37 CFR §§1.56, 1.97 and 1.98 (3 pp.); Form PTO-1449
Information Disclosure Statement (3 pp.); Copy of Executed and Recorded
Assignments (12 pp. total); Copy of Notice Regarding Power of Attorney (1 pg.);
Copy of Executed Declaration Claiming Small Entity Status –Nonprofit
Organization (2 pp.); Copy of Executed Declarations (8 pp. total); Copy of Formal
Drawings (76 Sheets); Return Postcard.

Check in the amount of \$370.00 for Basic Filing Fee (Small Entity)
Authorization to charge additional fees to Deposit Account No. 03-1721

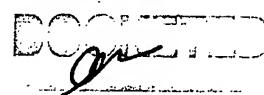
Attorney: KKS
3341830_1.DOC

Case No. 2003080-0071 (SK-744-CON4)

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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
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08/986,025
2003080-0037
12/03/1997

SAMUEL J.
DANISHEFSKY

1078/1C598US

KAROLINE K. M. SHAIR
CHOATE, HALL & STEWART
EXCHANGE PLACE, 53 STATE STREET
BOSTON, MA 02109

Date Mailed: 04/17/2000

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/27/2000.

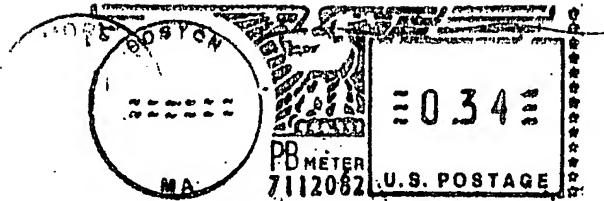
The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Ronald Harmon / Brenda Gray

Customer Service Center

Initial Patent Examination Division (703) 308-1202

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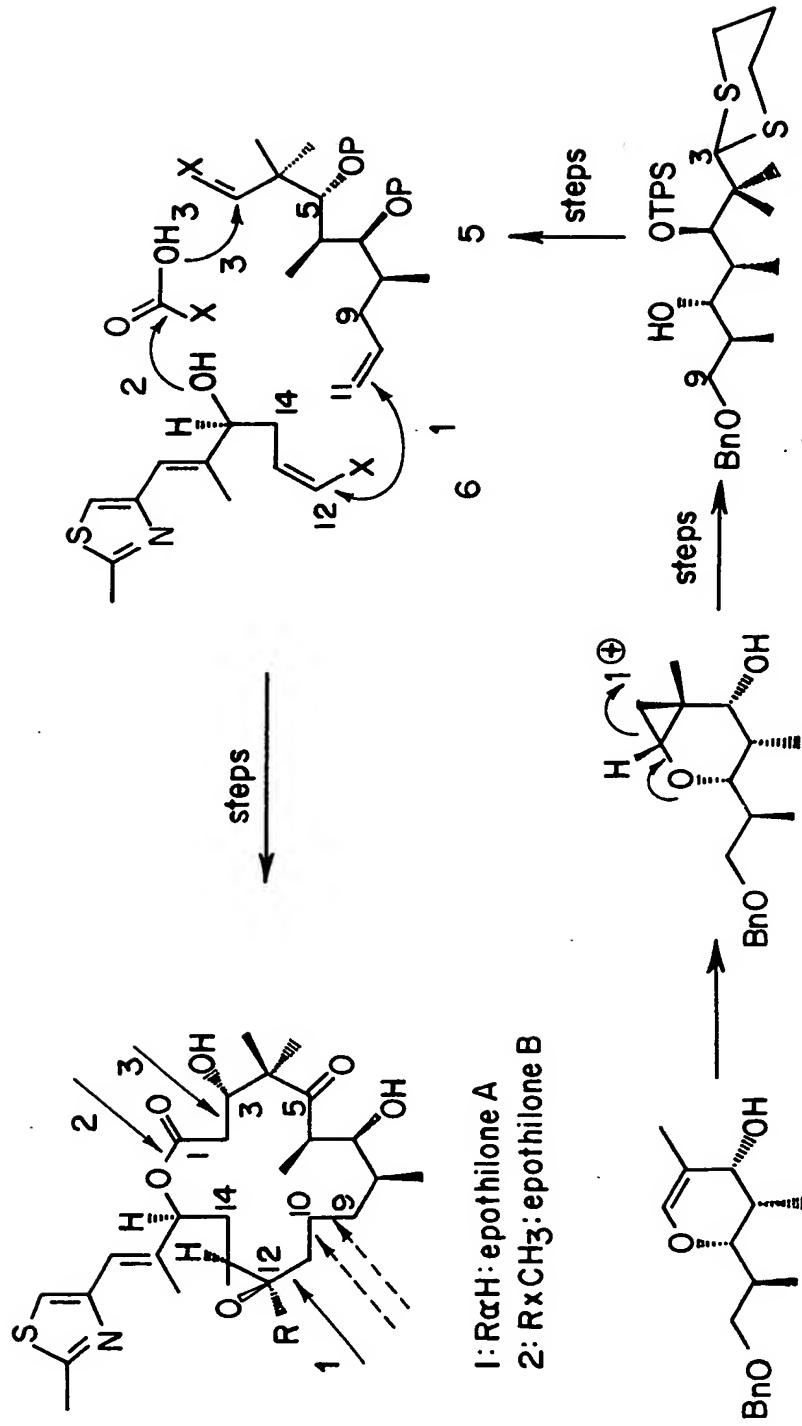
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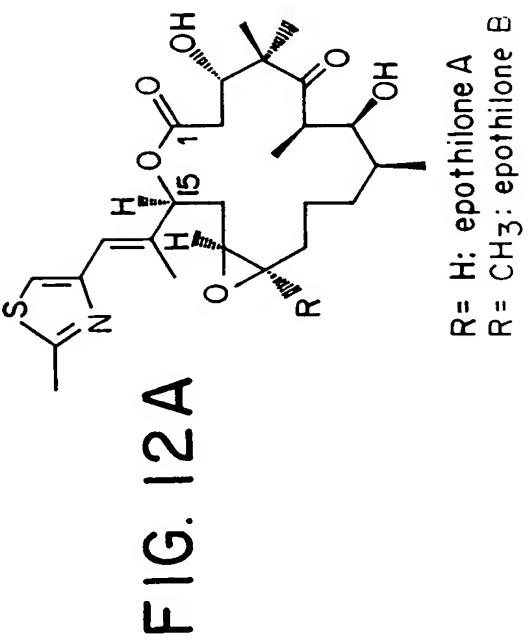
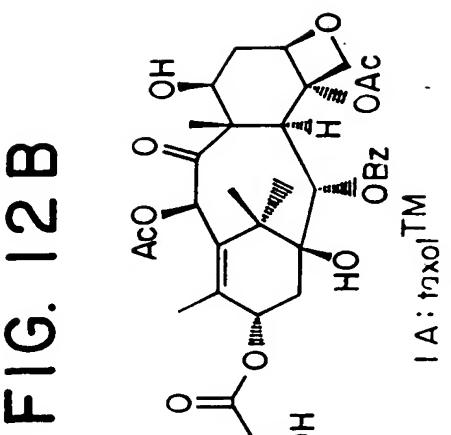
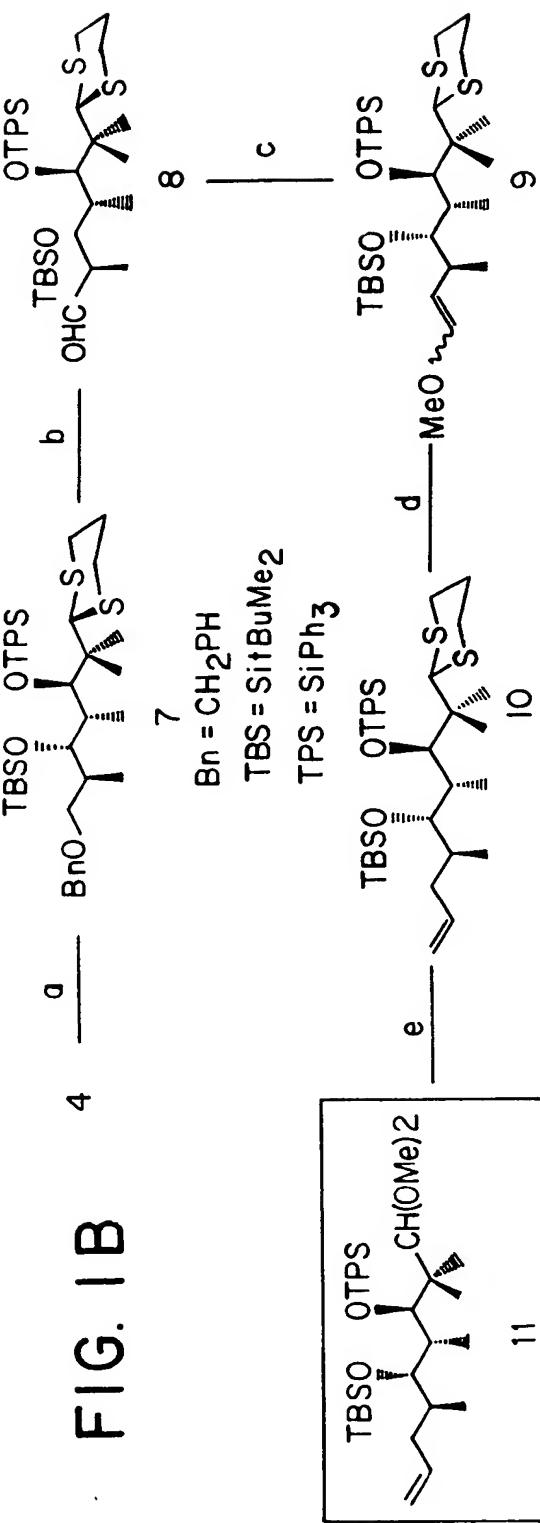
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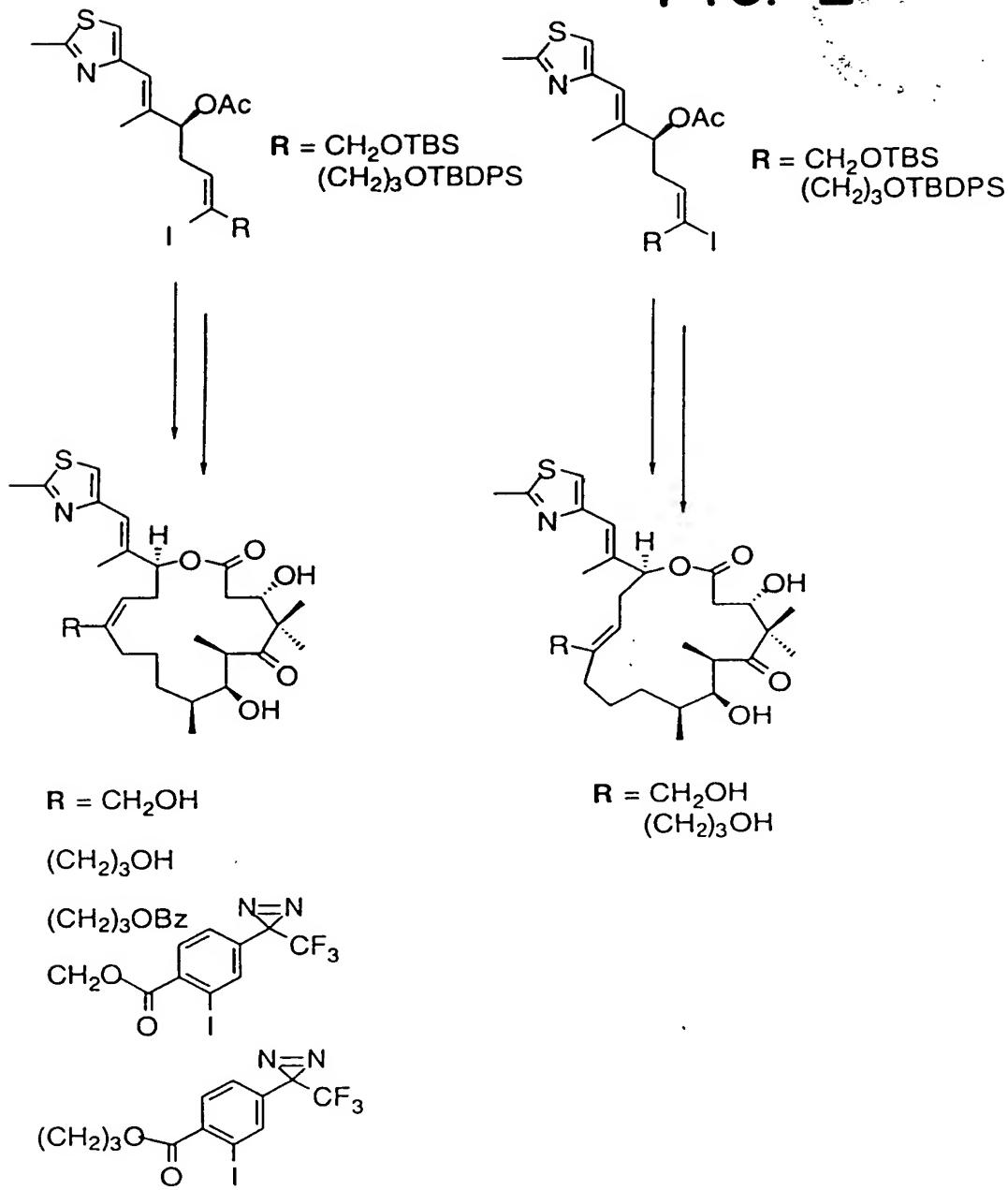
FIG. IA





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FIG. 2



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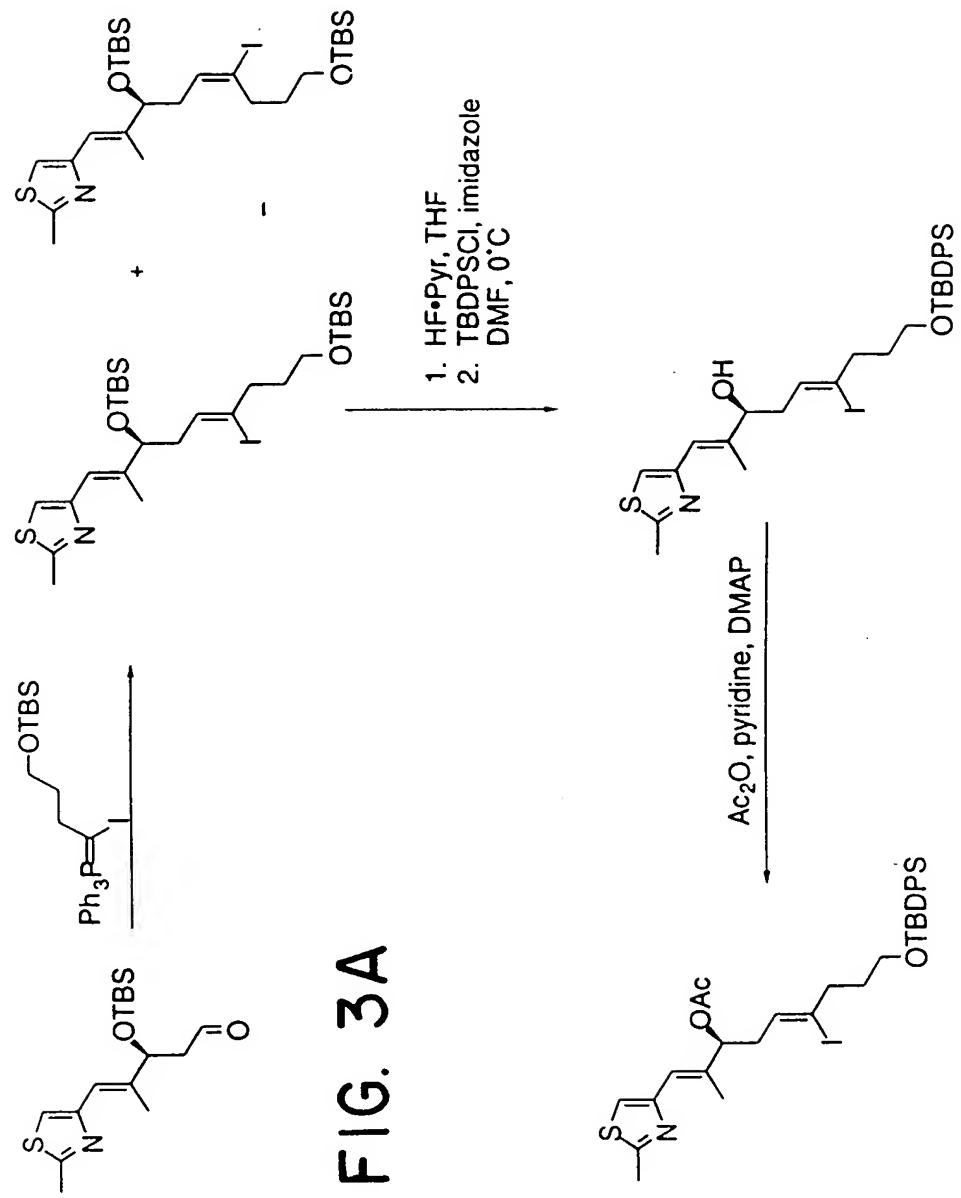
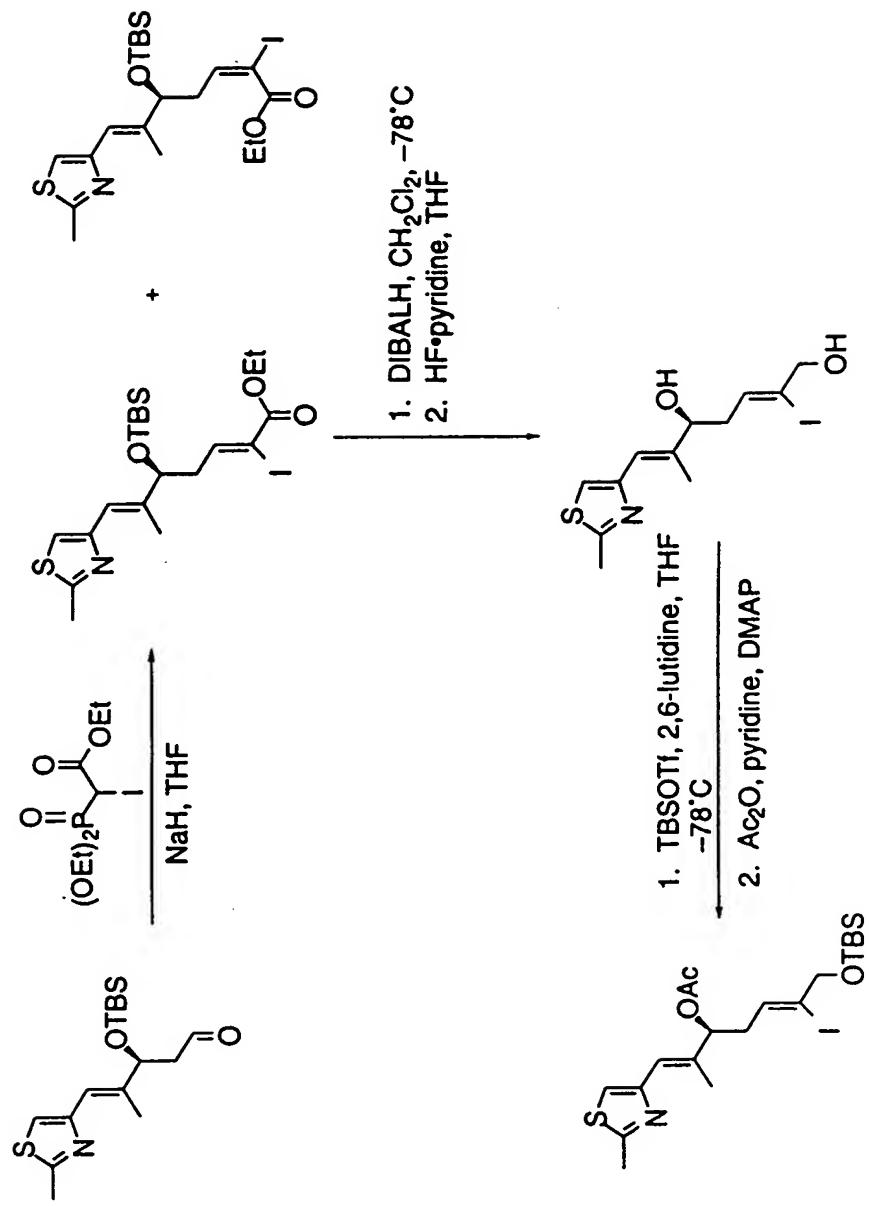
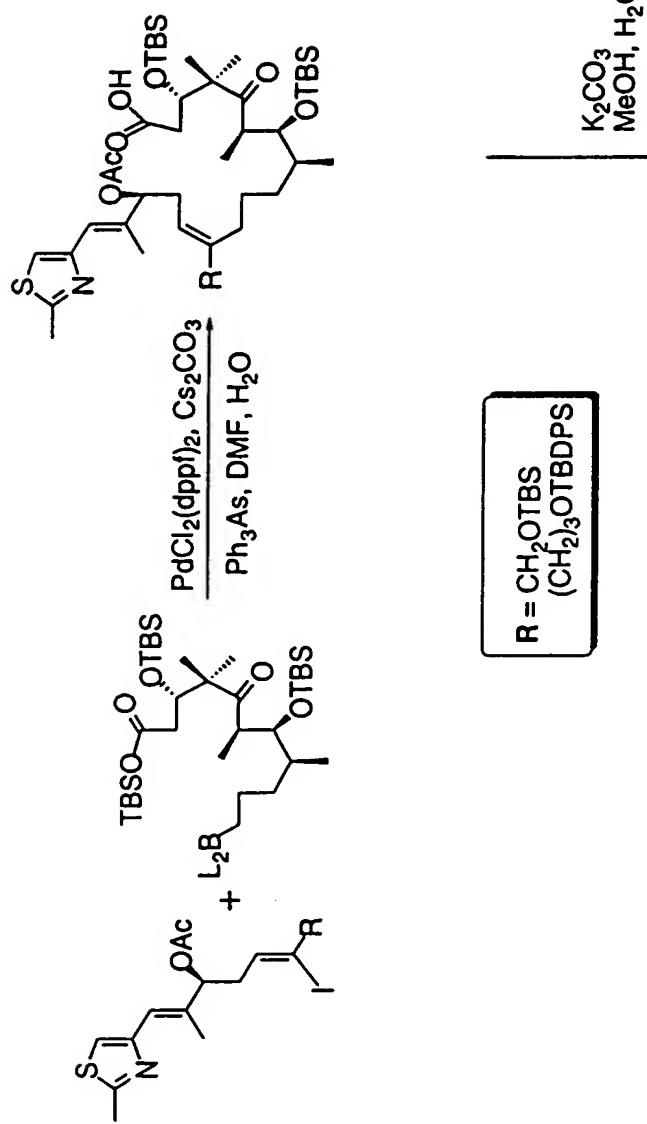


FIG. 3B



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FIG. 3C



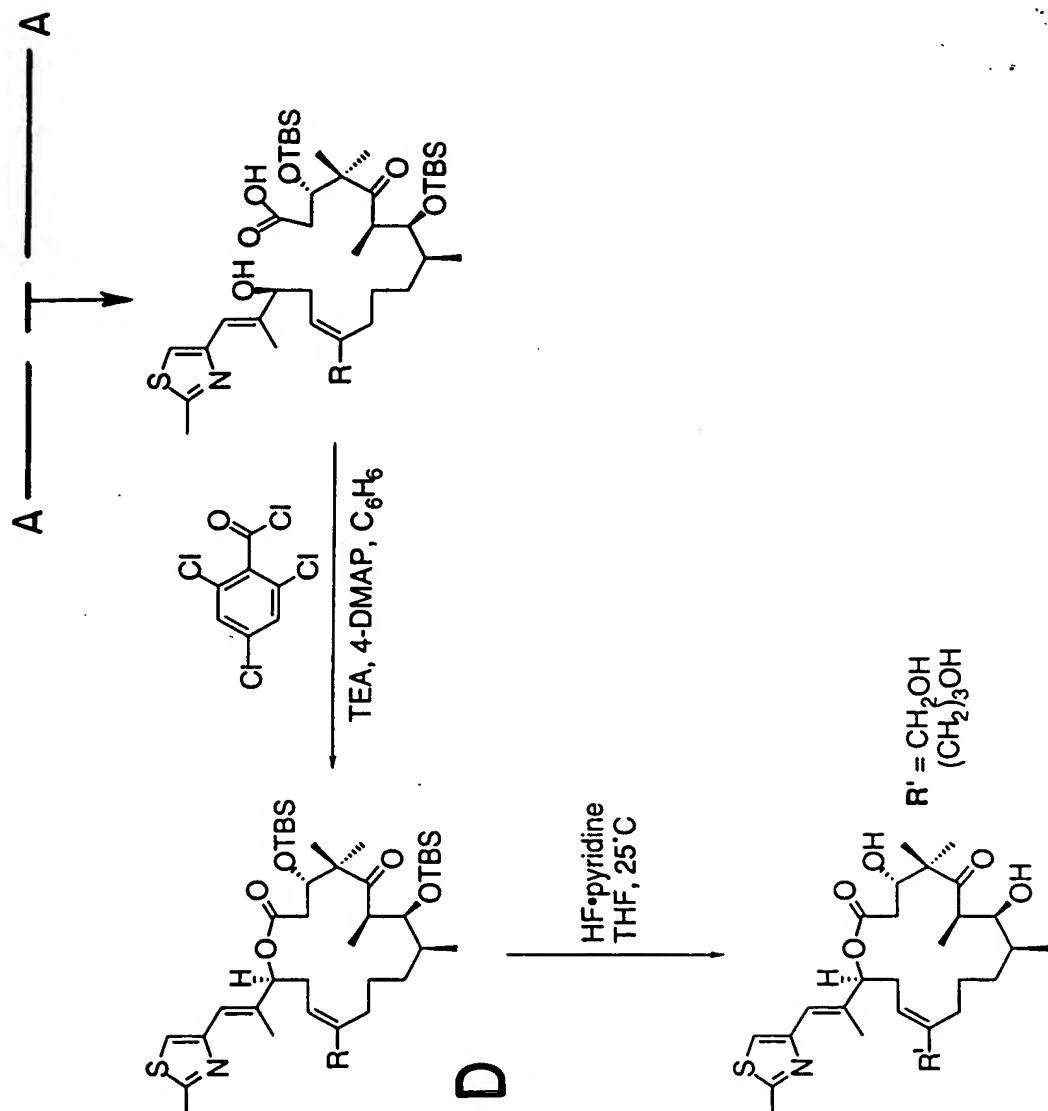


FIG. 3D

FIG. 3E

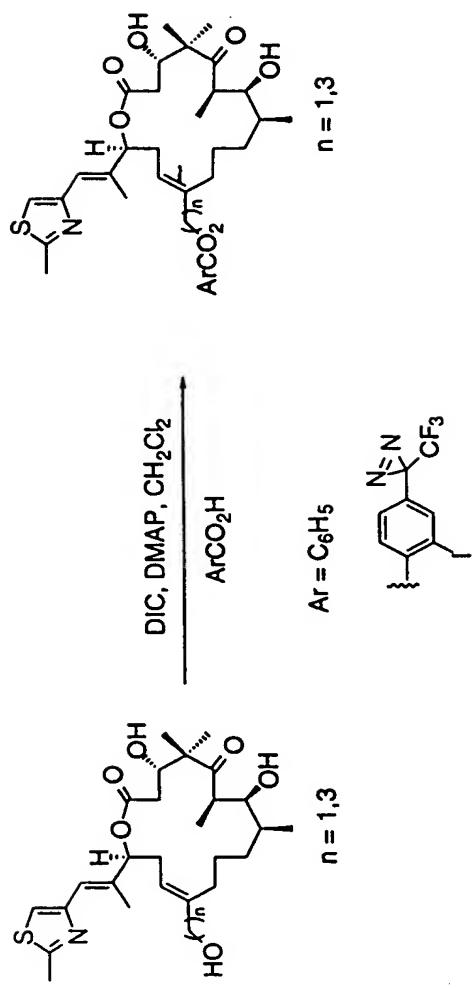


FIG. 3F

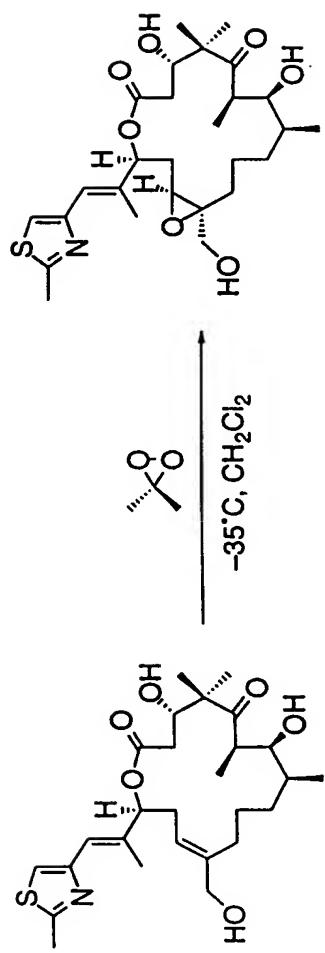


FIG. 4 A

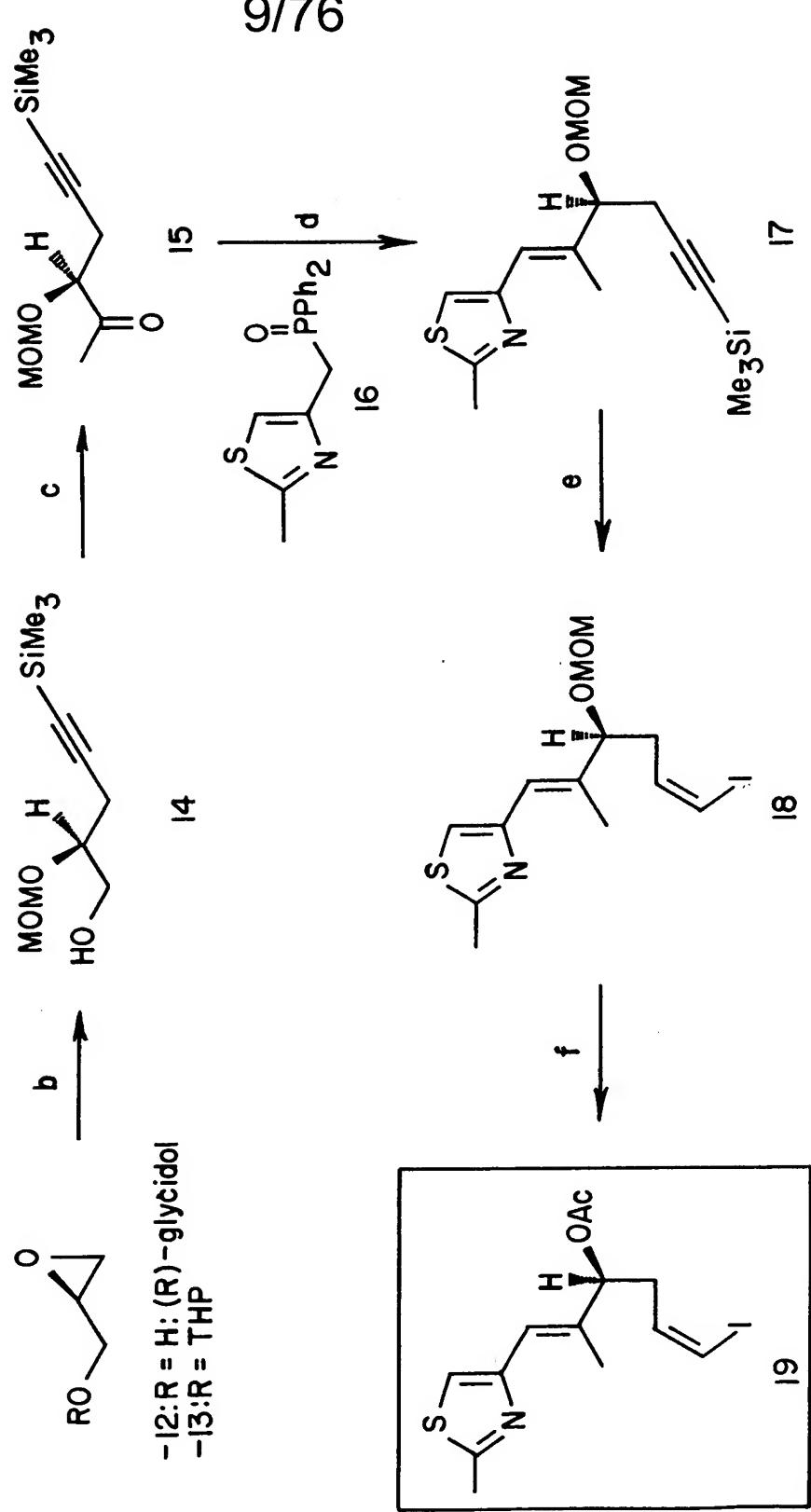
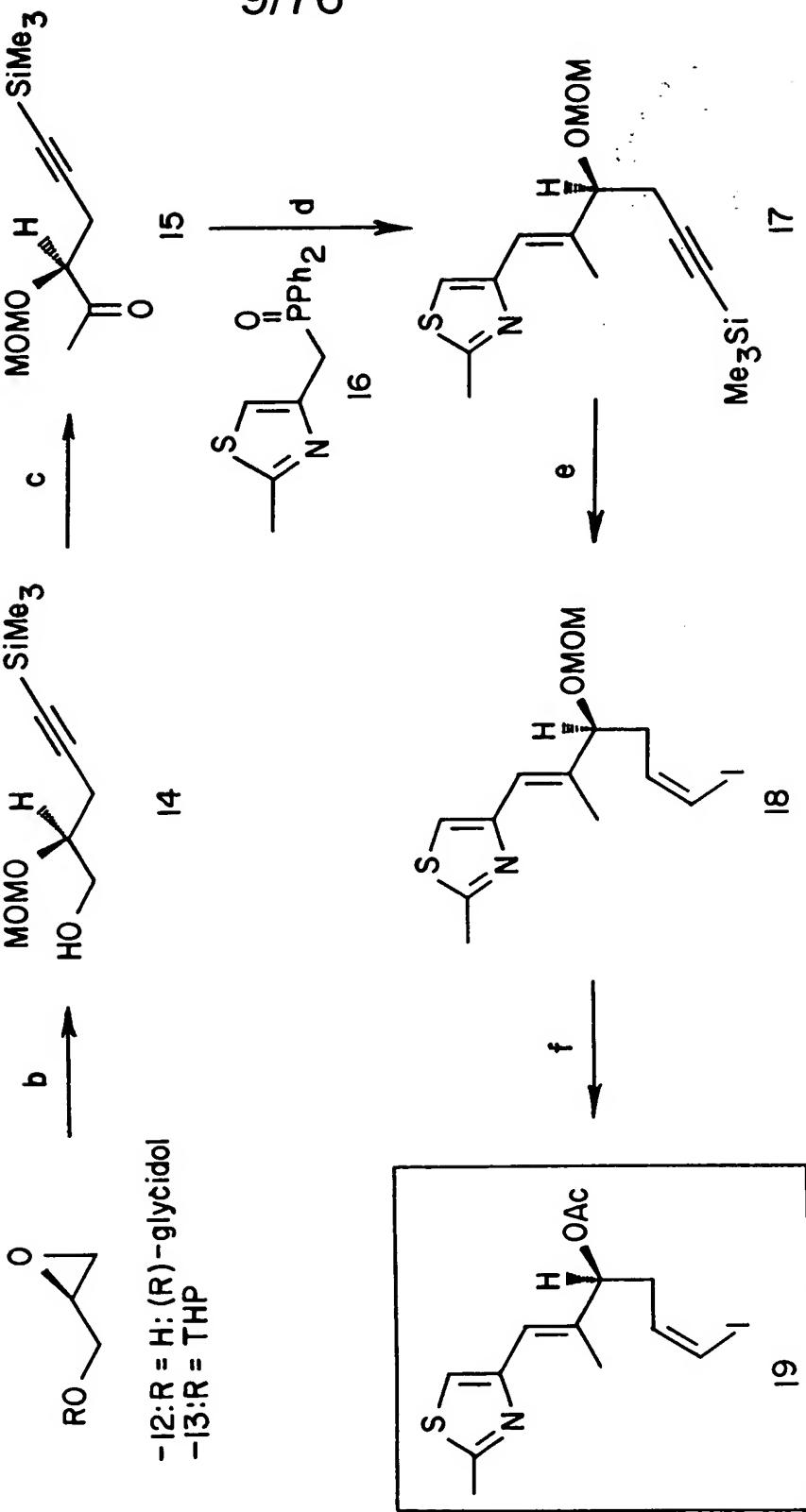
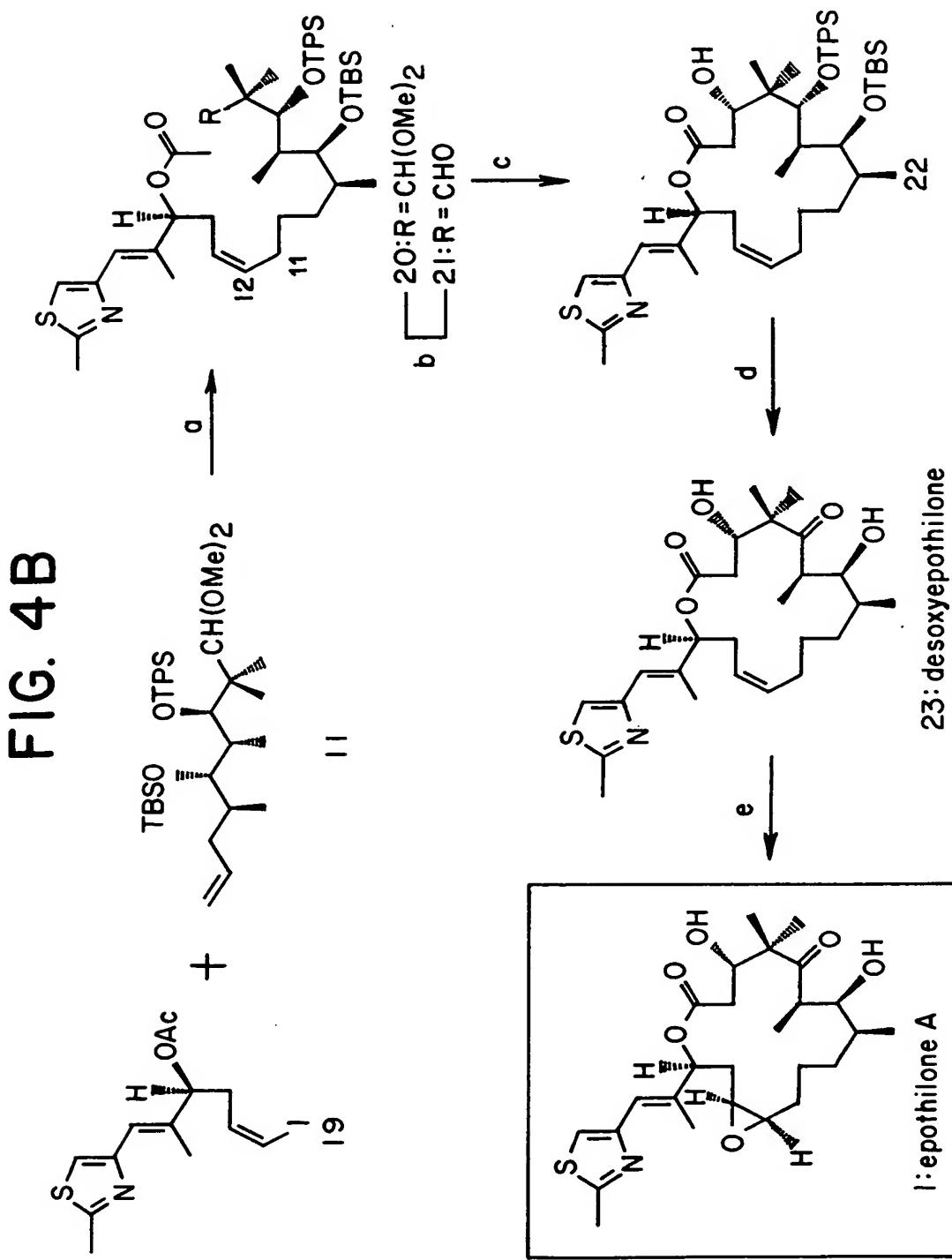


FIG. 4A

-|2:R = H: (R)-glycidol
-|3:R = THP



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FIG. 4B

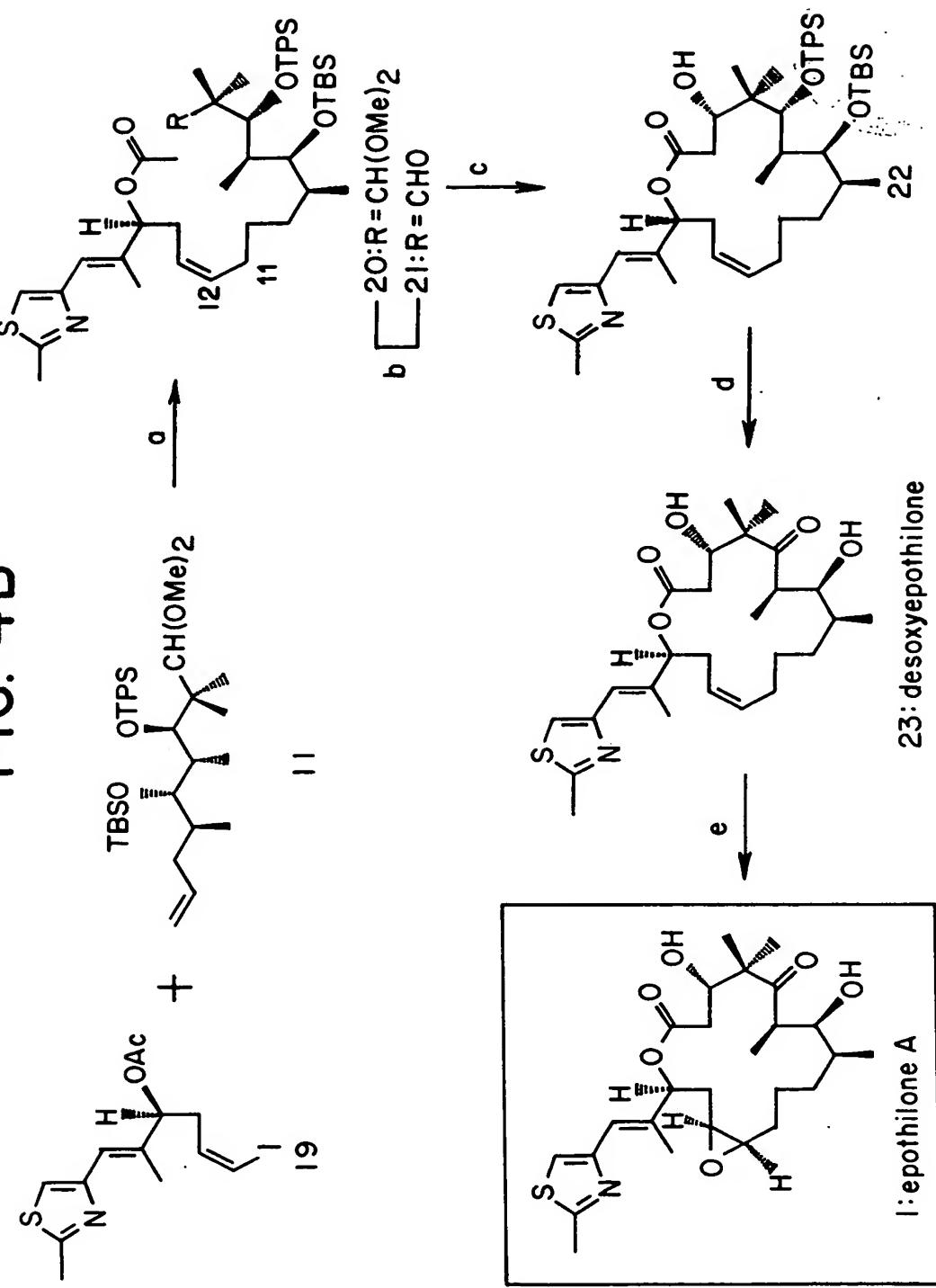
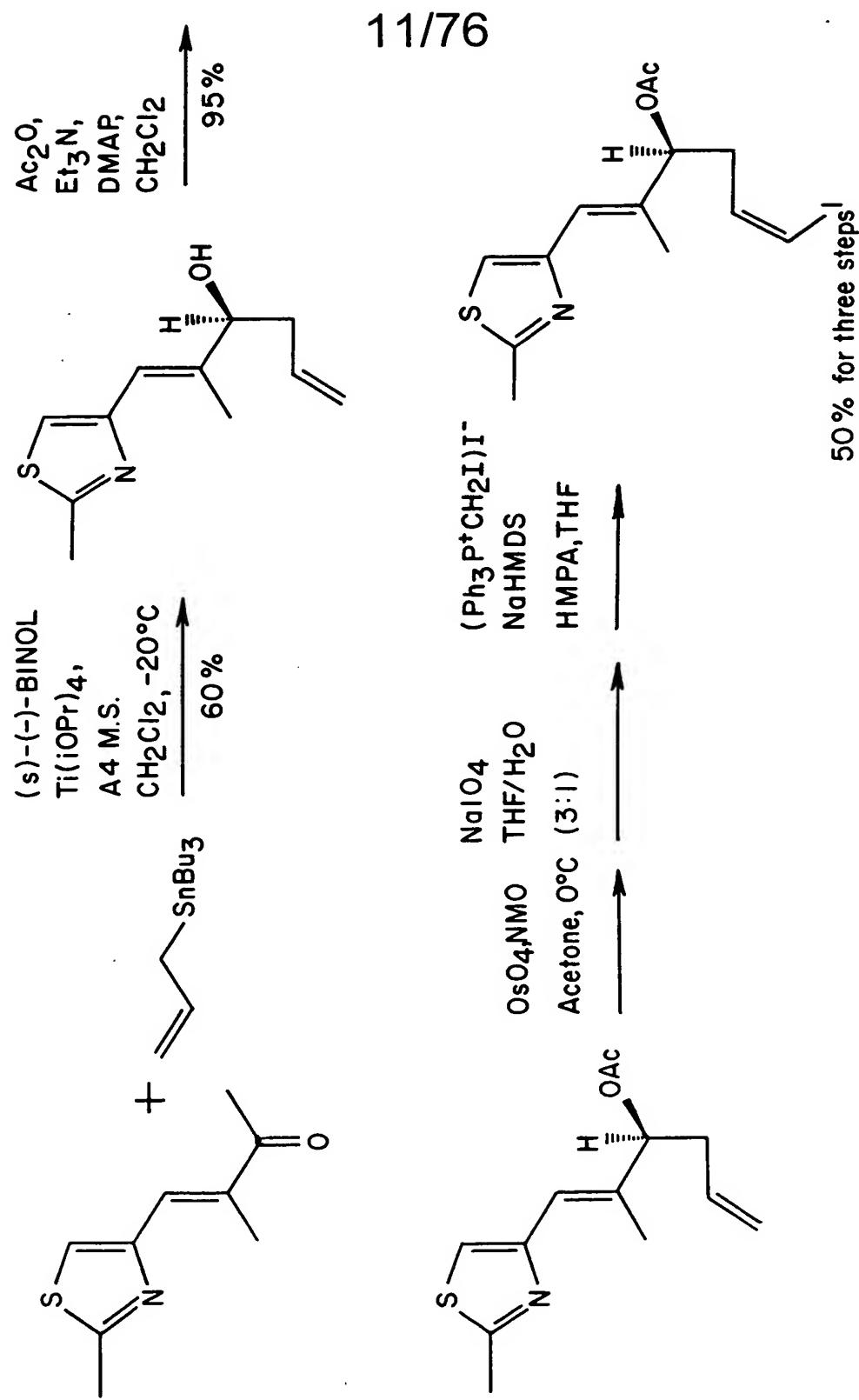
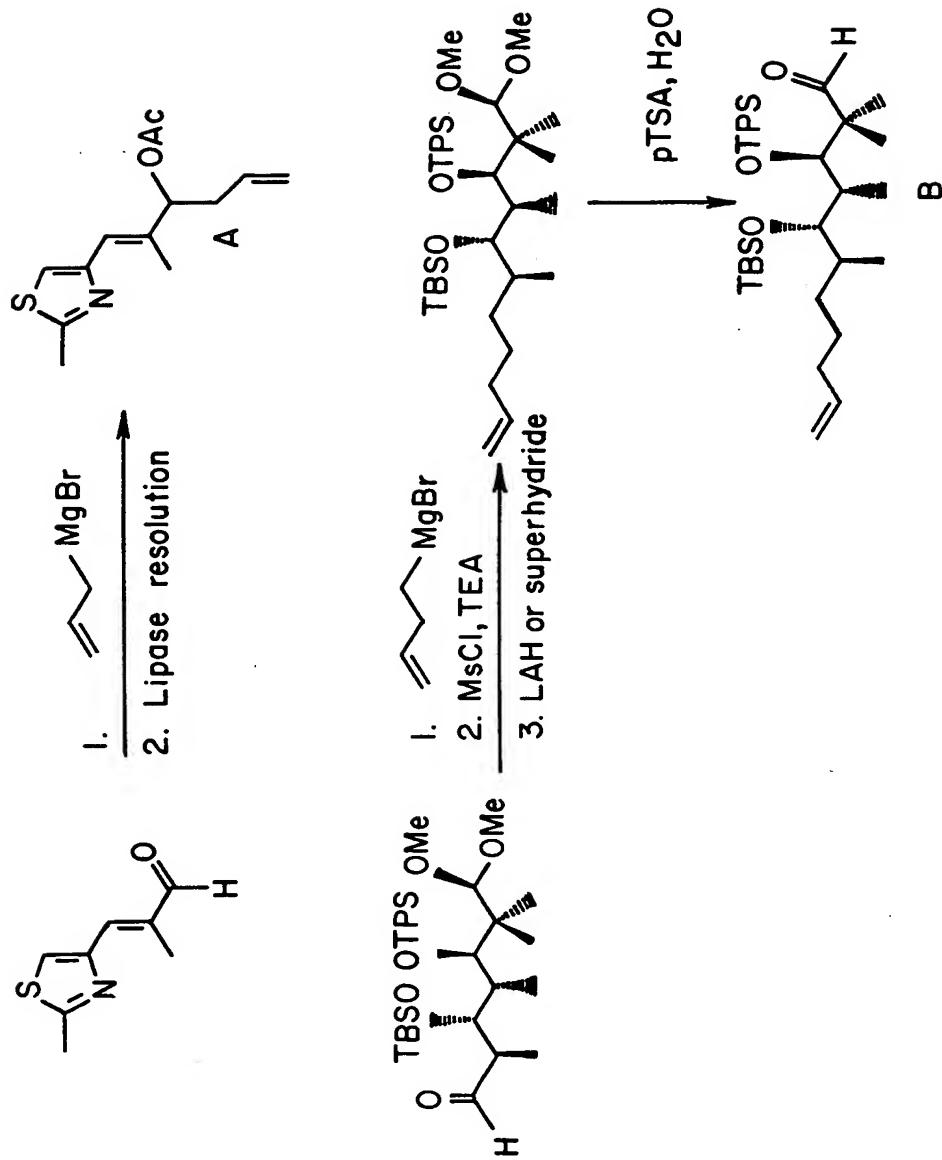


FIG. 5



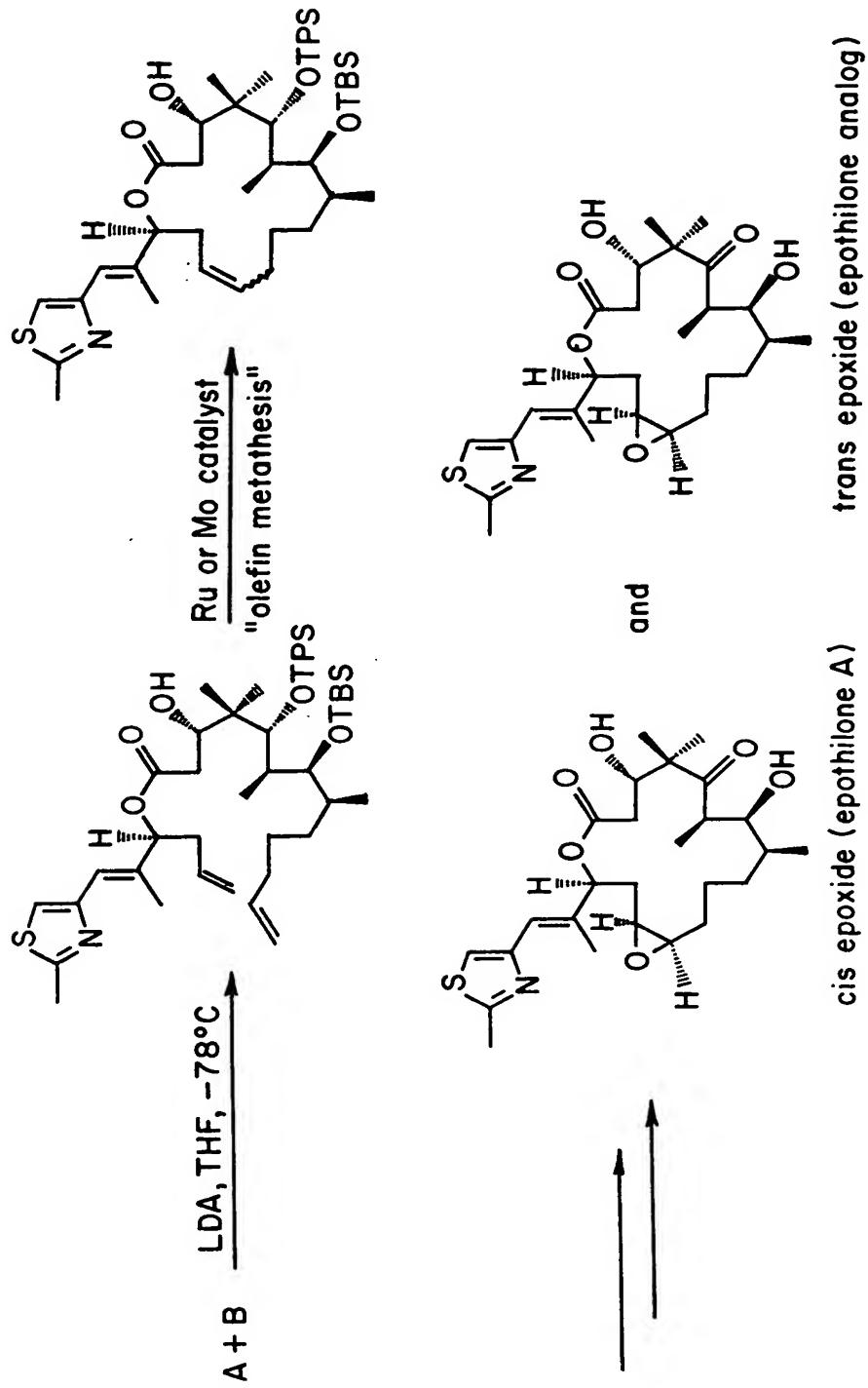
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FIG. 6A



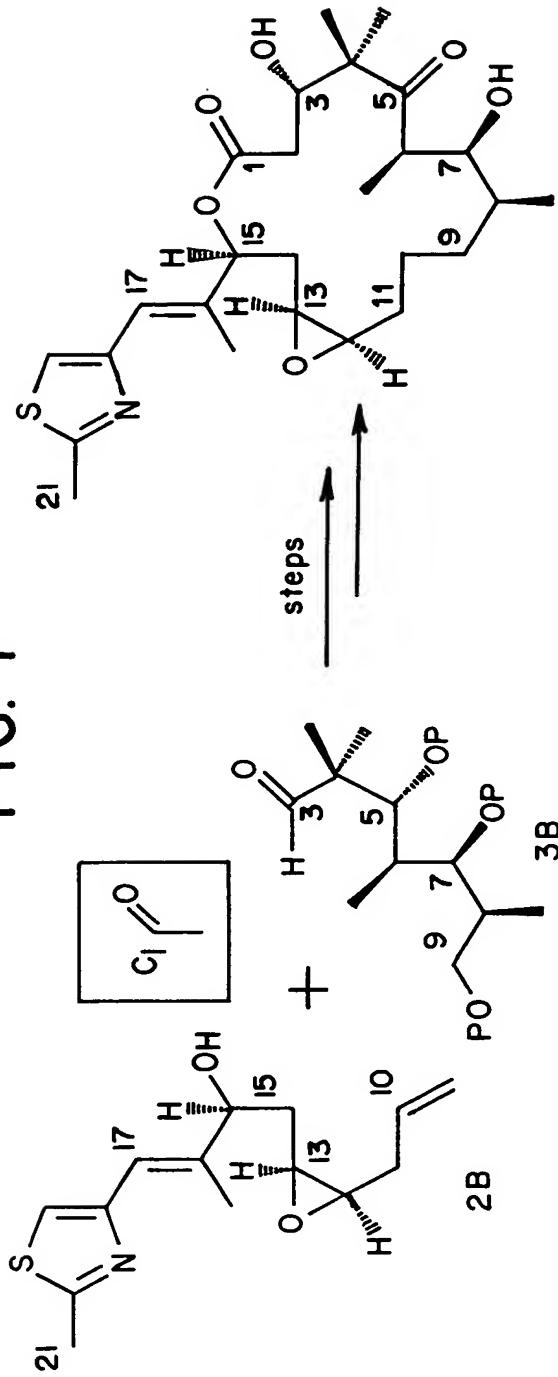
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FIG. 6B



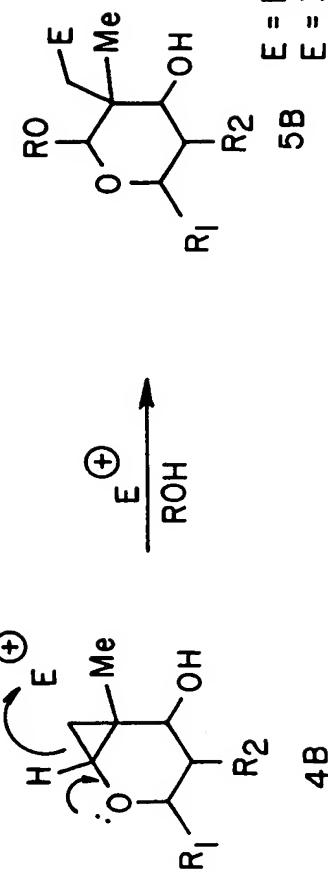
* 17 steps from known starting materials vs. 27 steps for aldol macrocyclization

FIG. 7



P = unspecified protecting group I: epothilone A

Convergent strategy for a total synthesis of epothilone A (1).



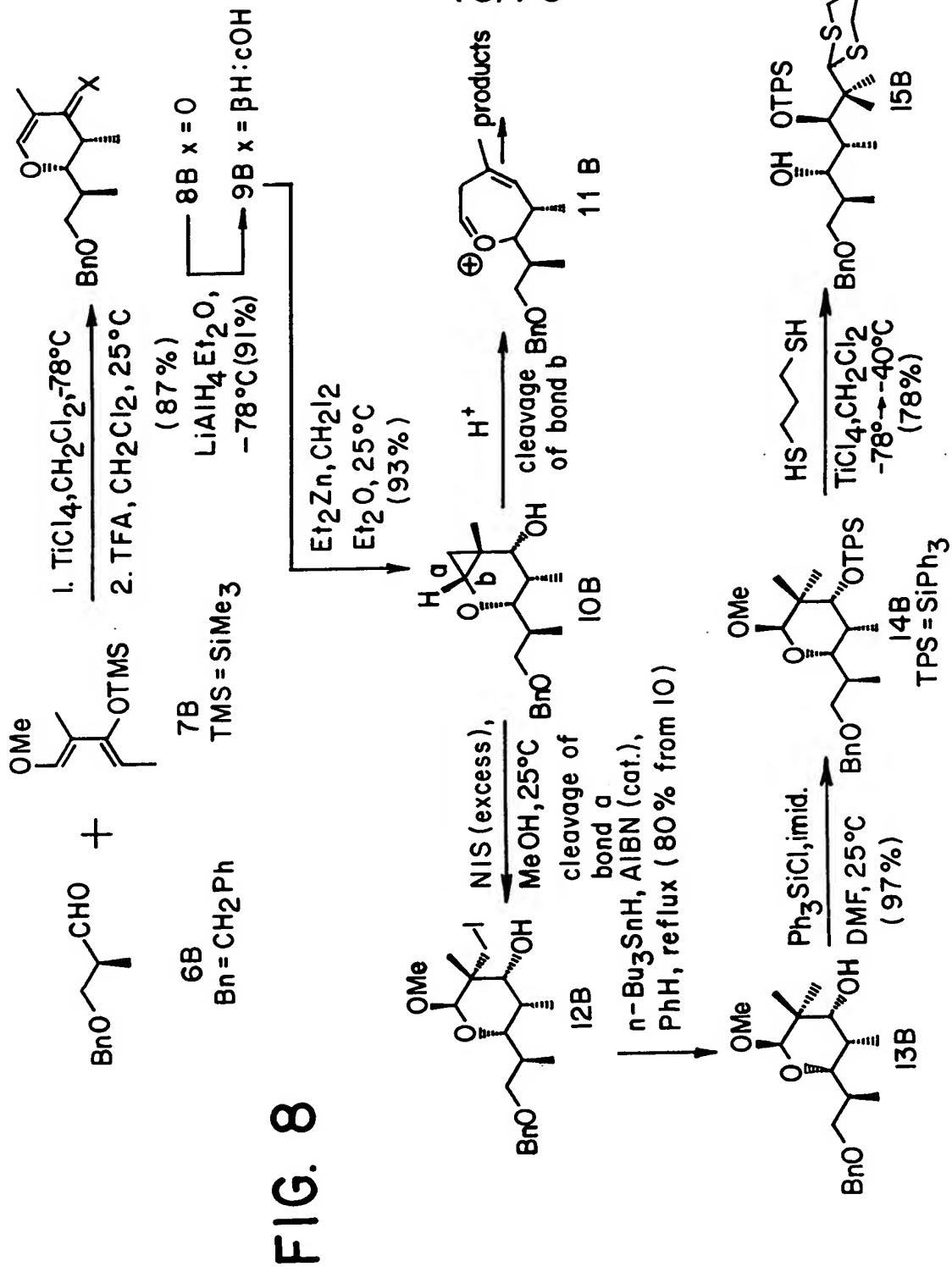
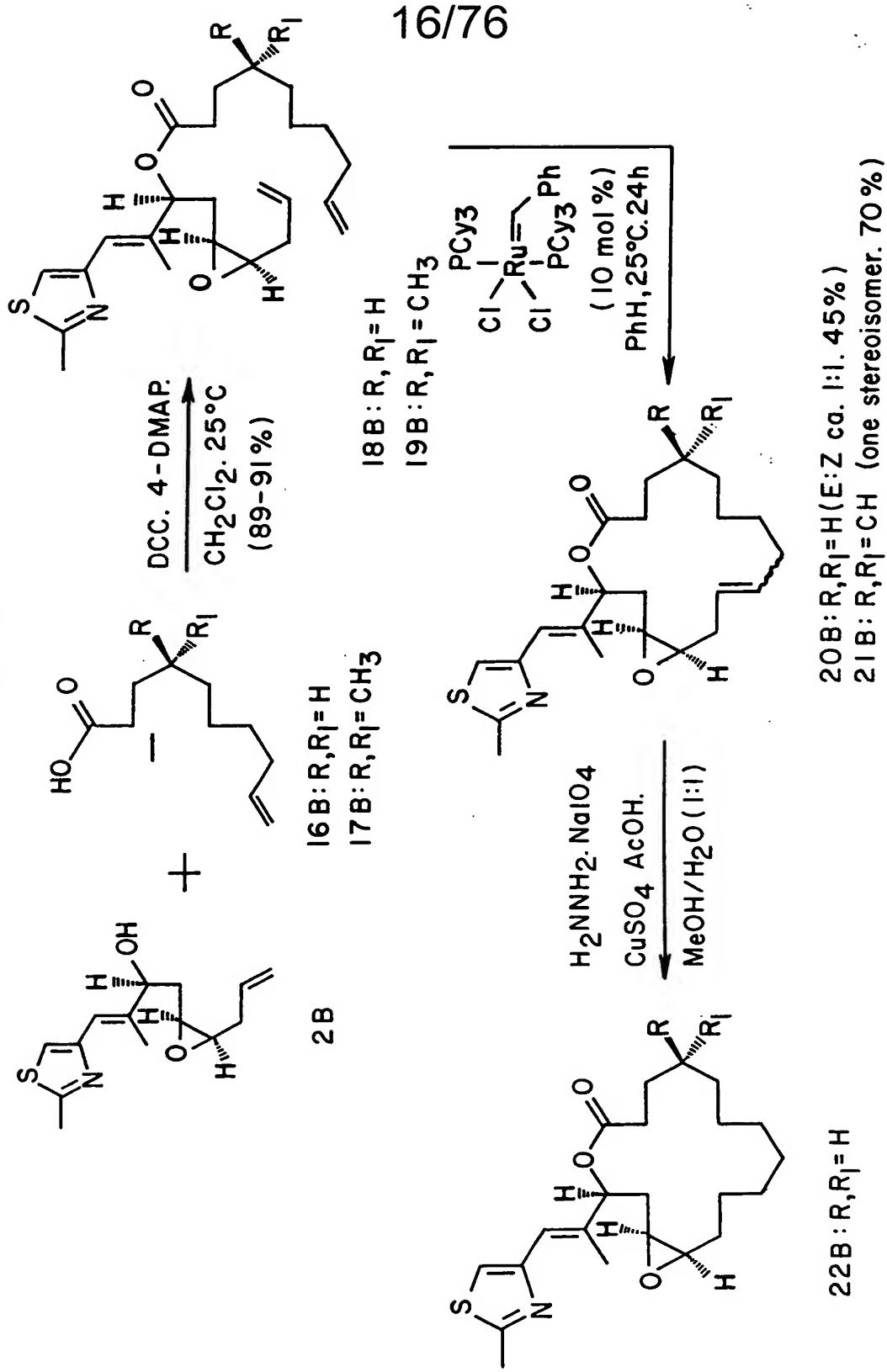
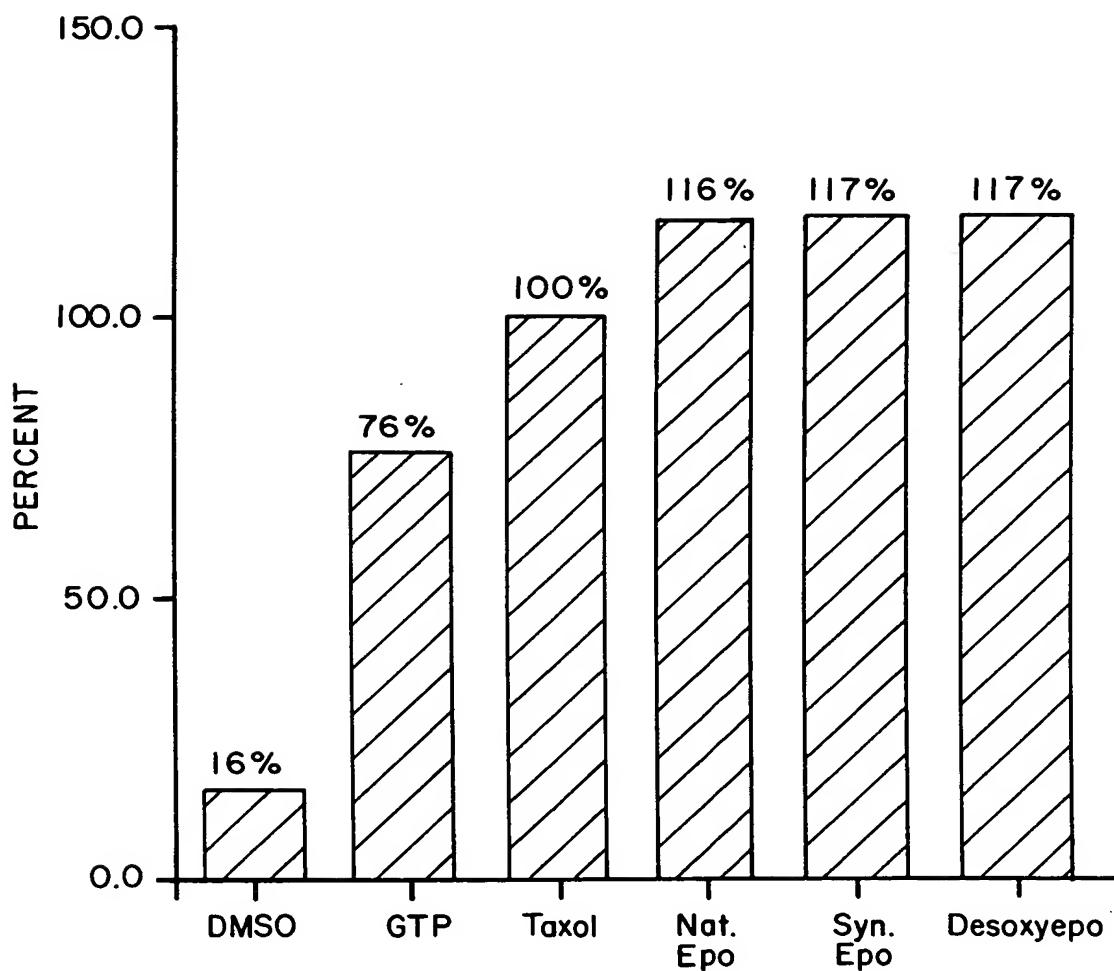


FIG. 9



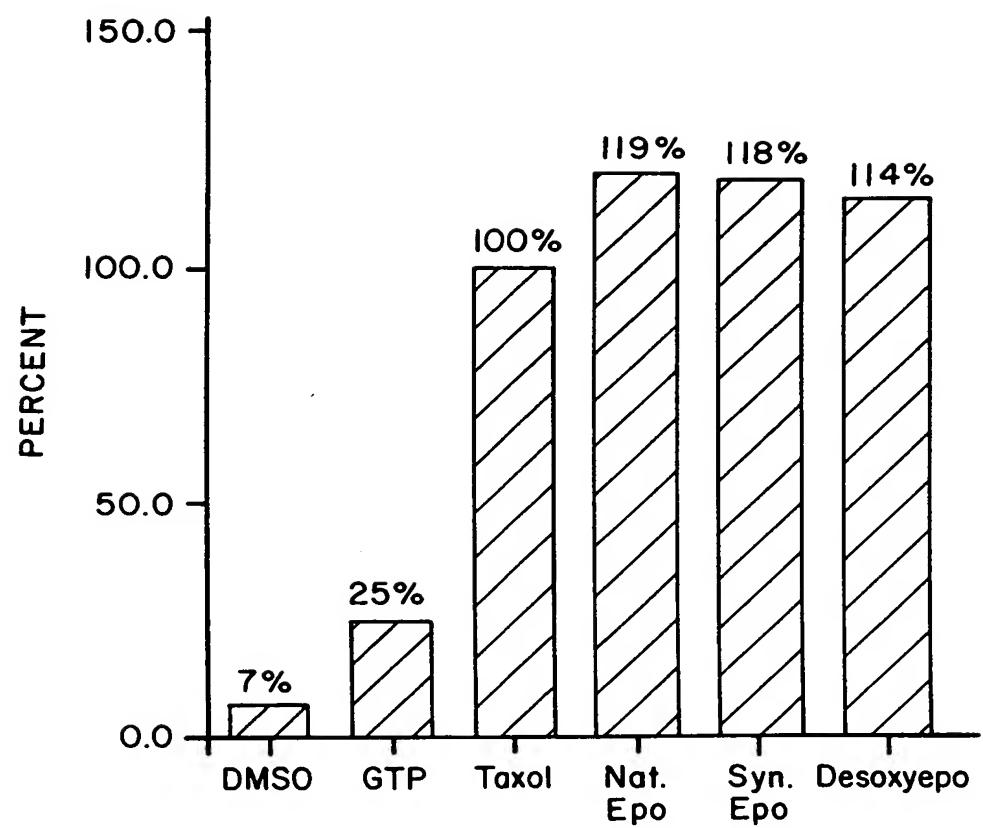
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FIG. 10



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FIG. II



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FIG. 13

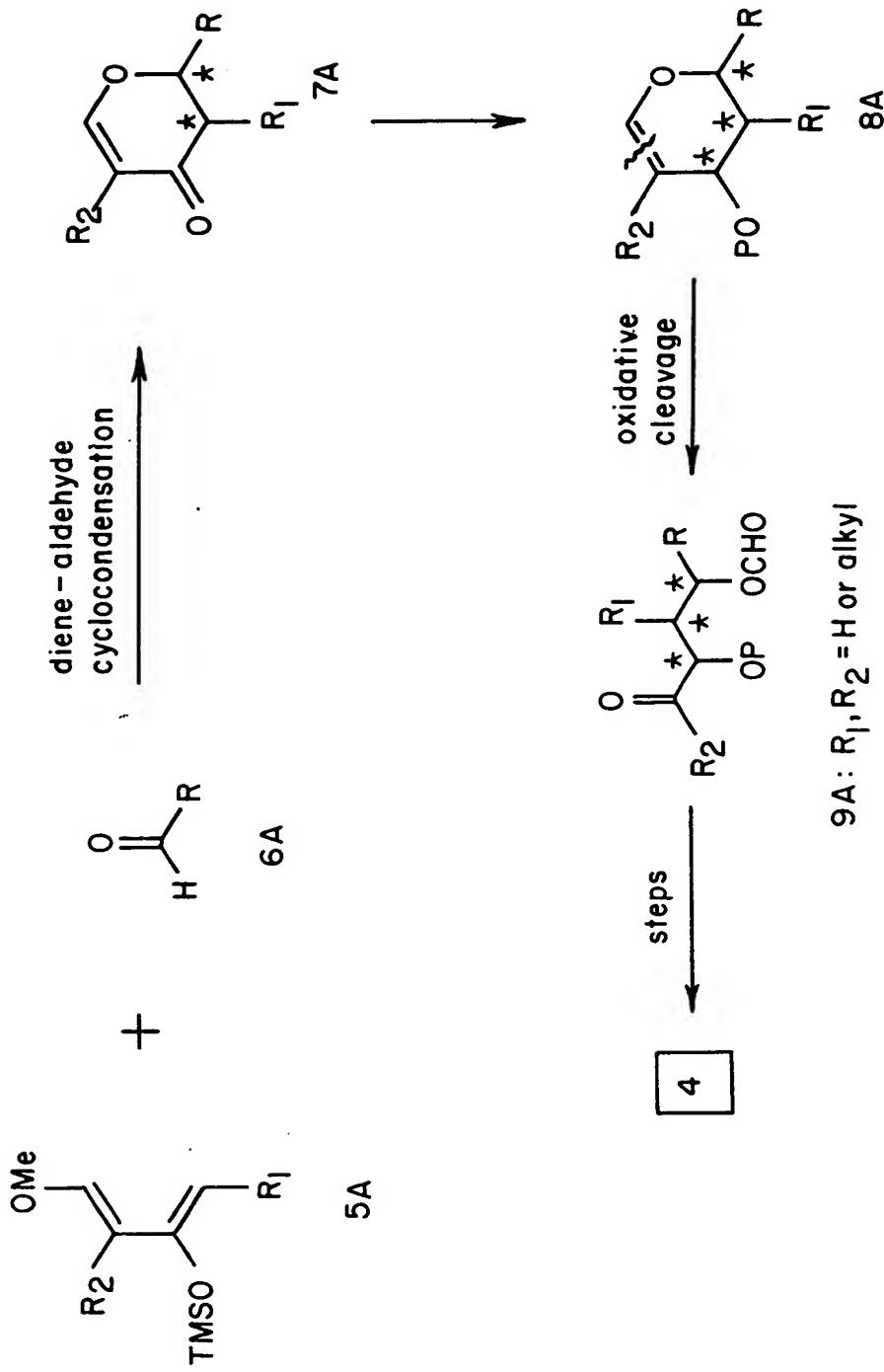


FIG. 14 A

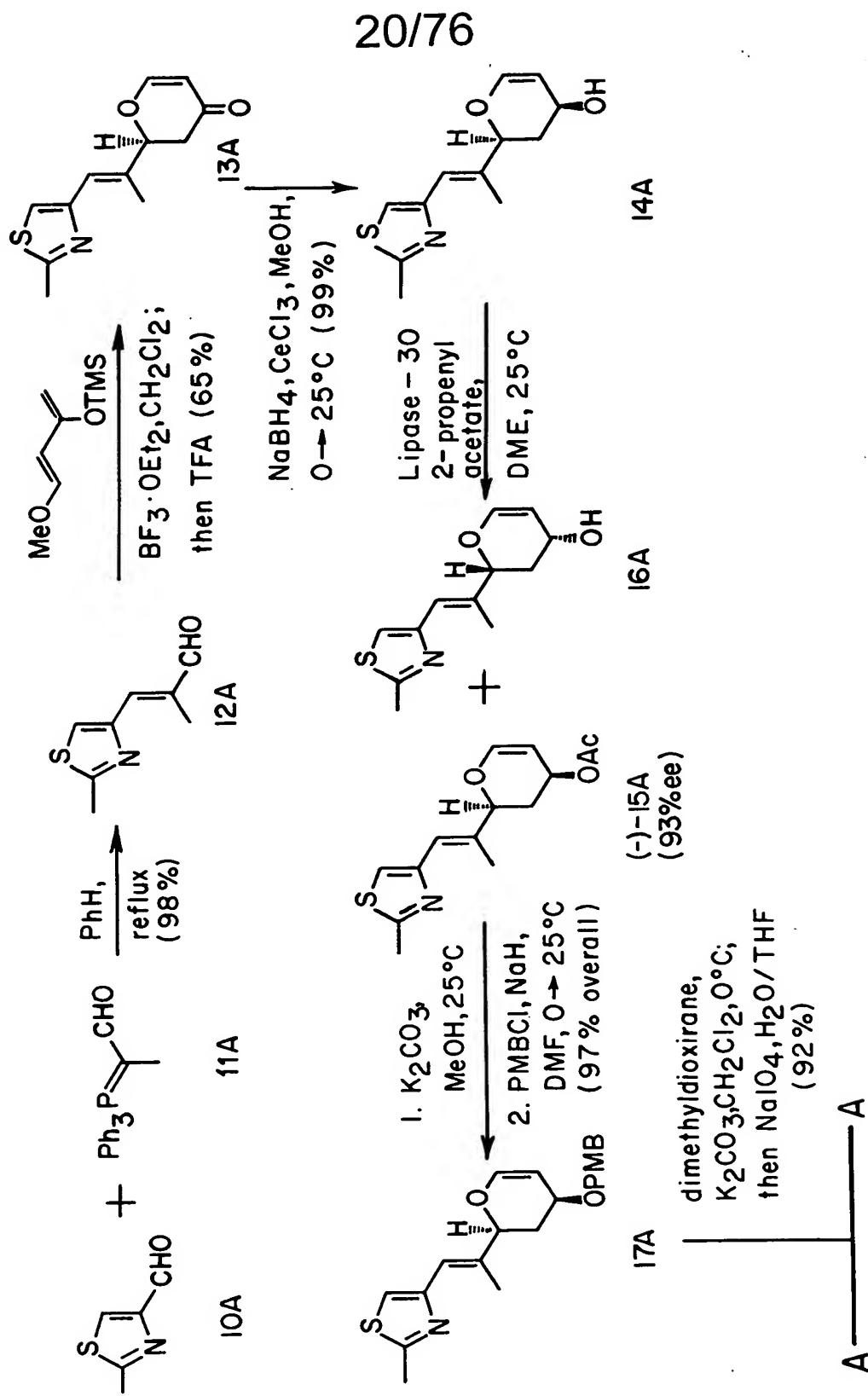


FIG. I4B

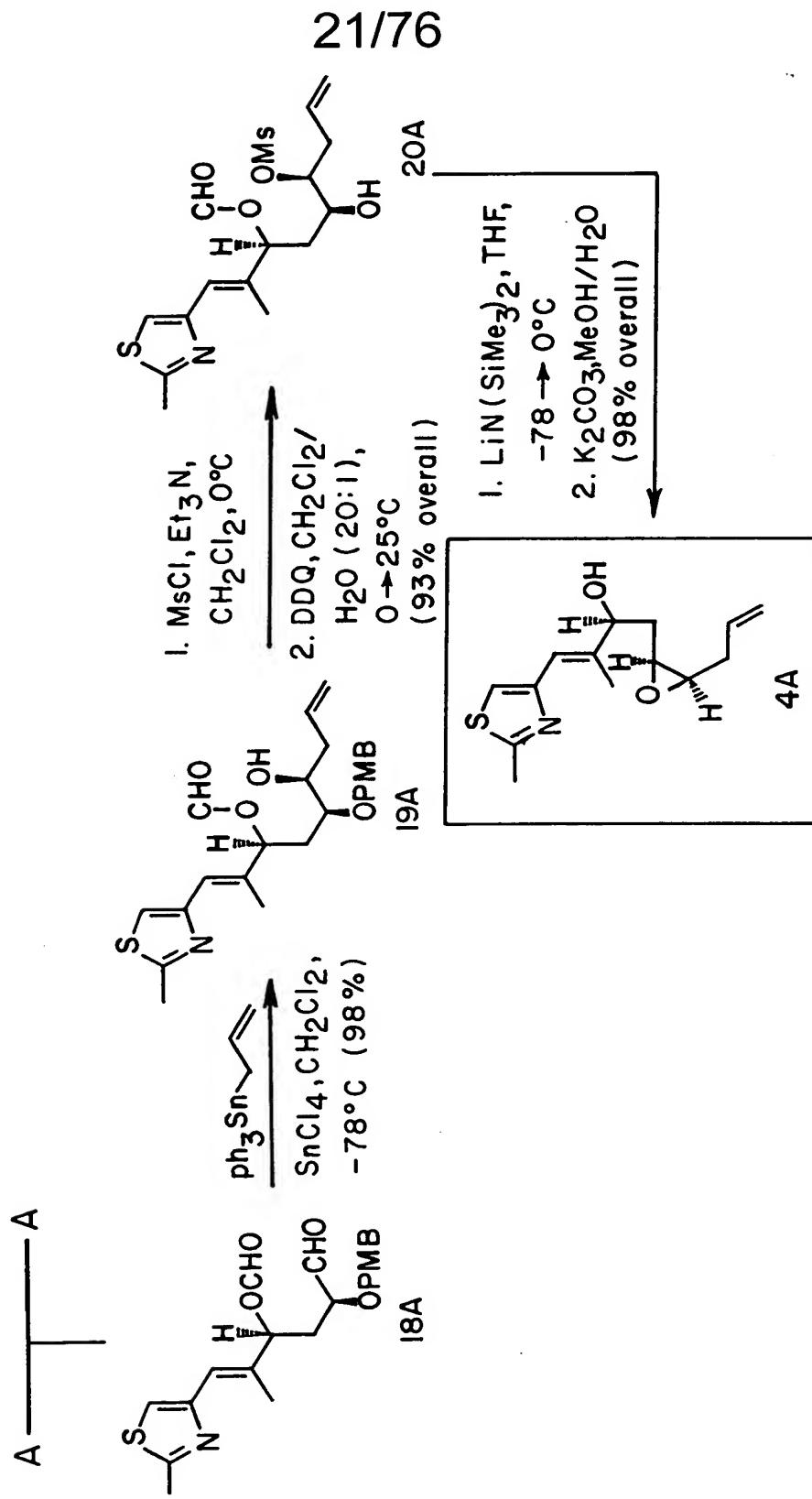
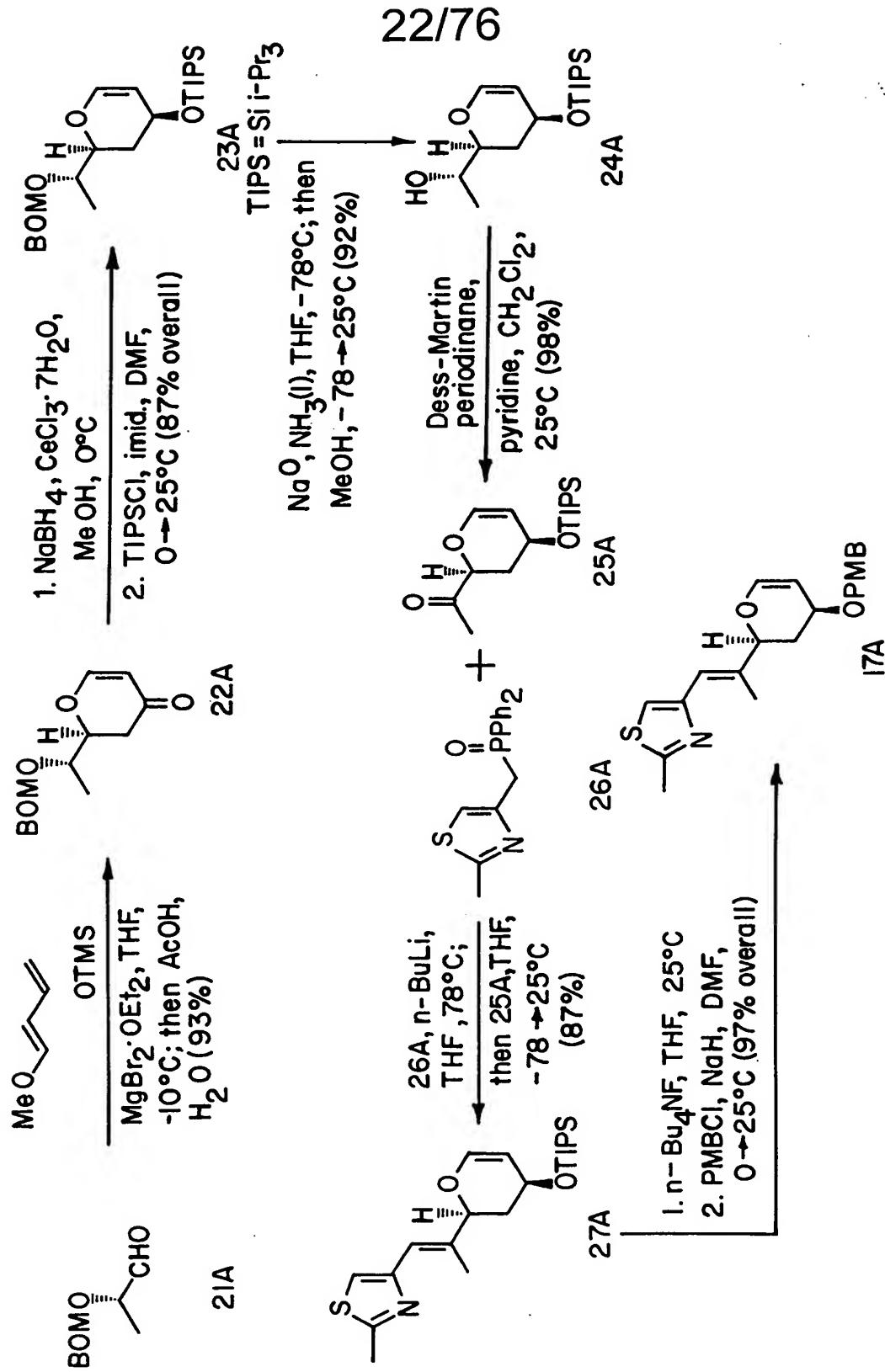


FIG. 5



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FIG. 16

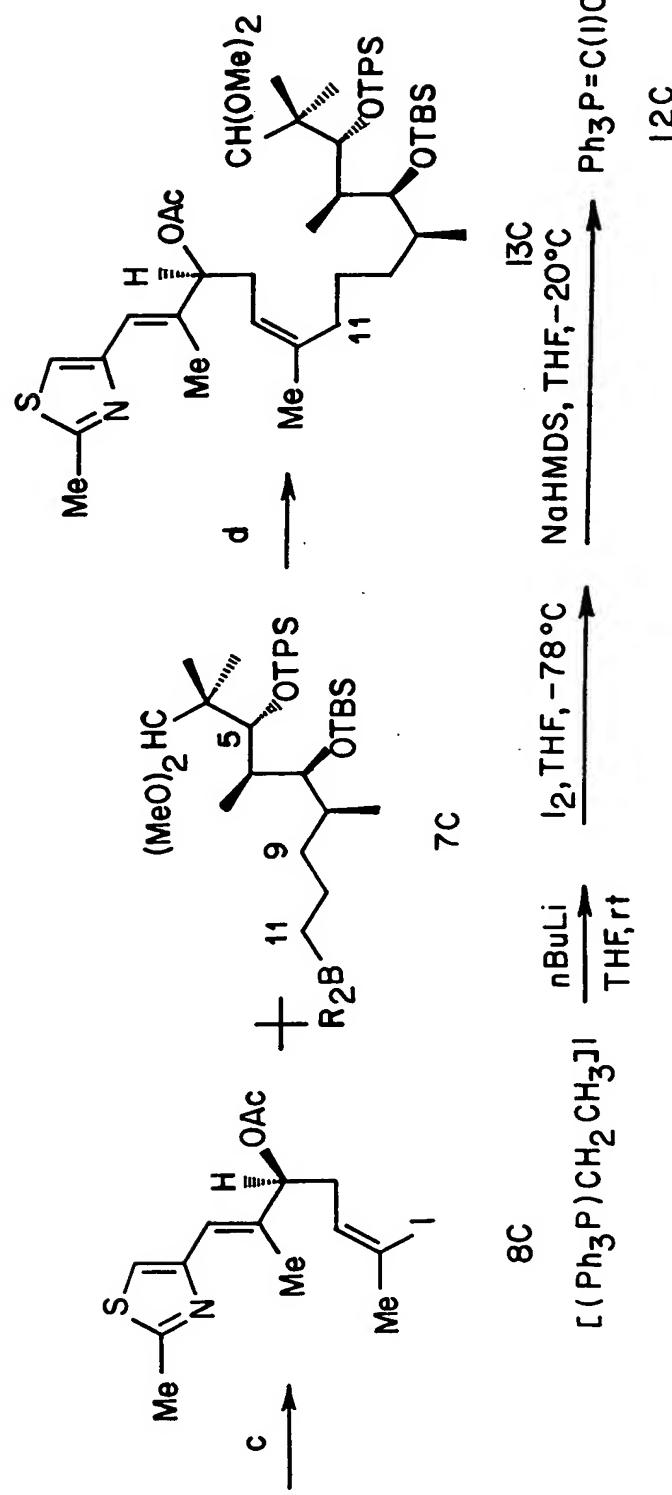
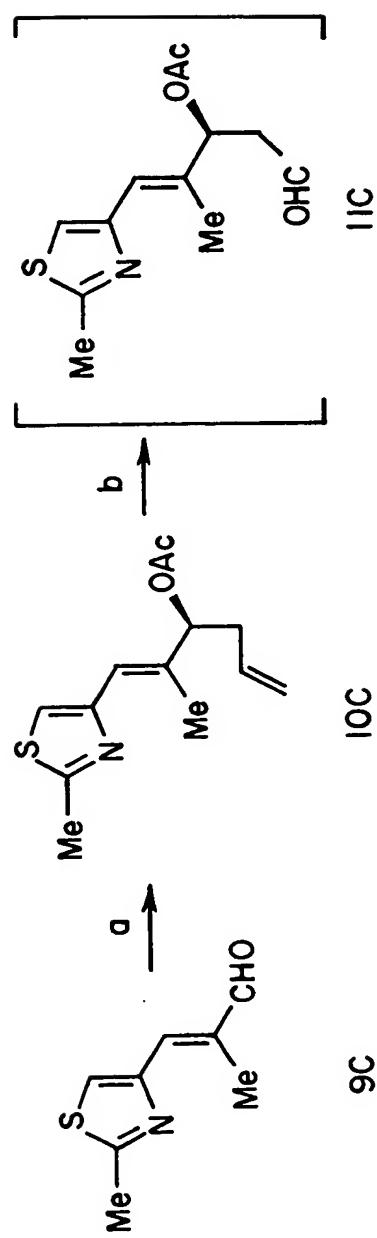
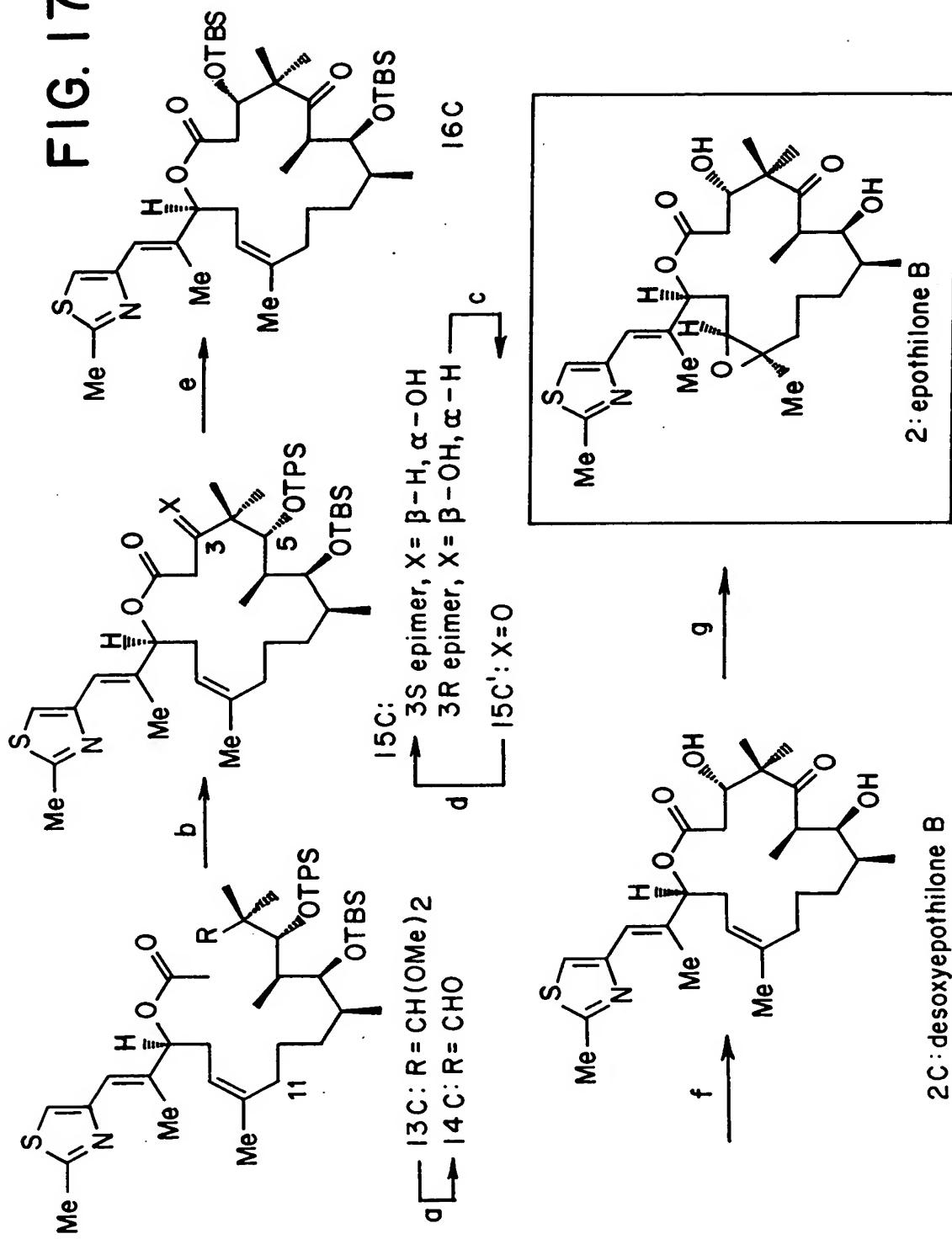


FIG. 17



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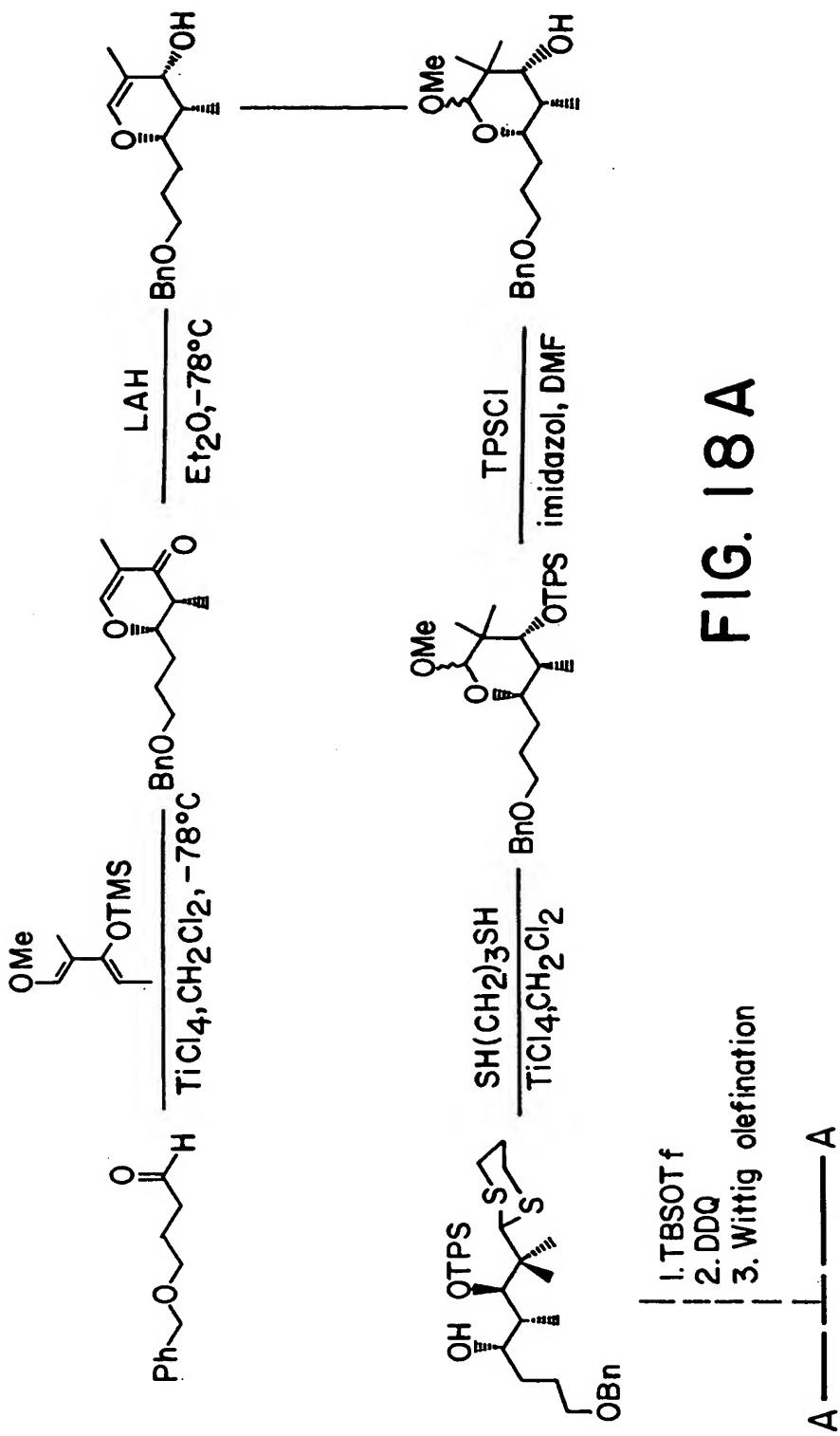


FIG. I 8 A

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FIG. 18B

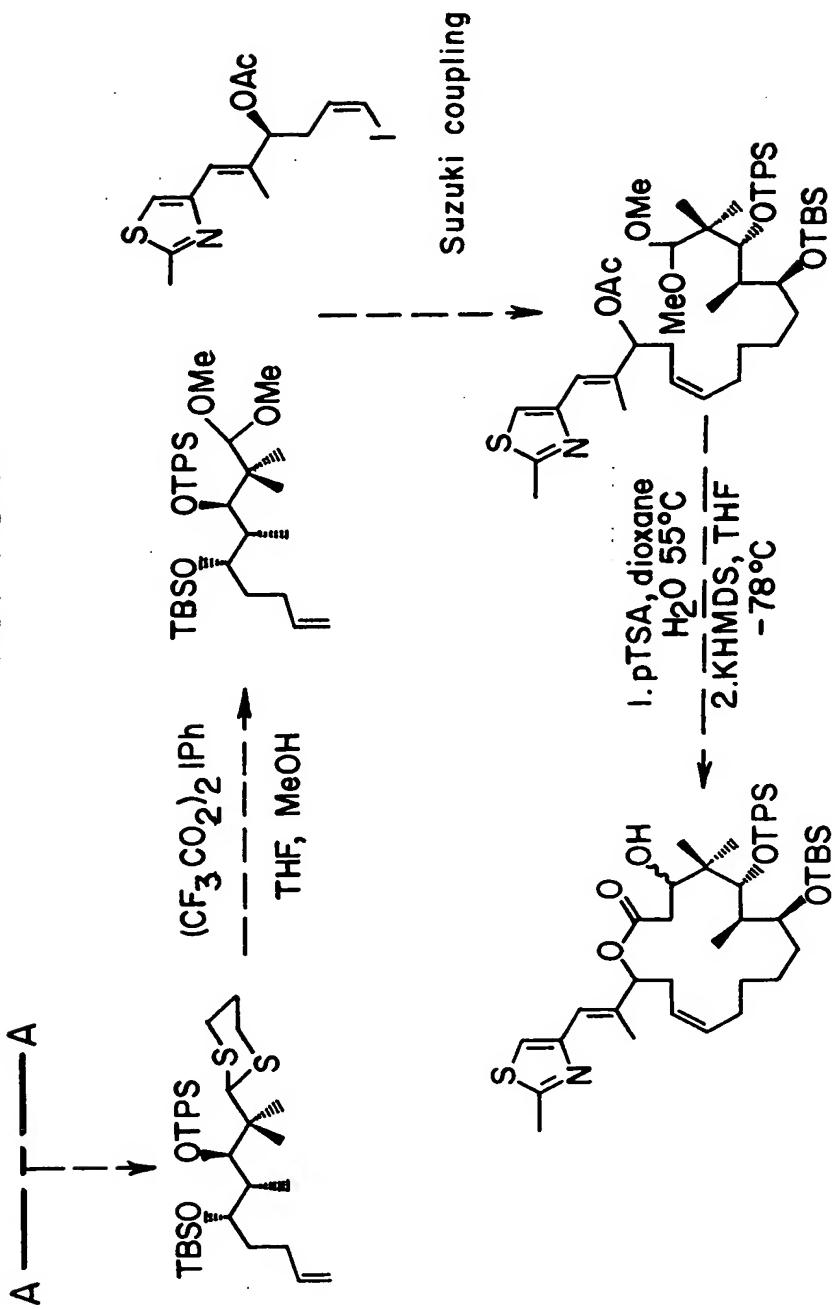
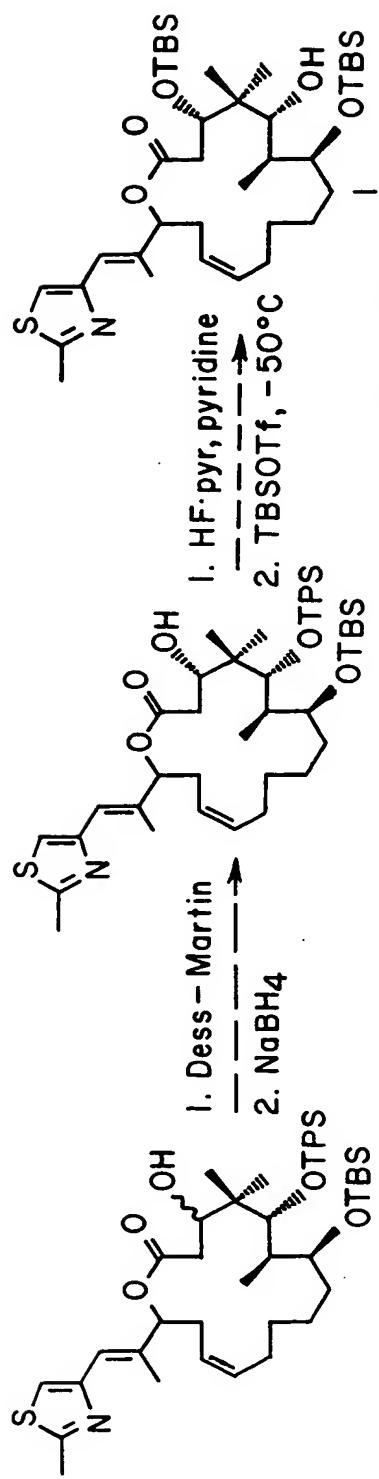


FIG. 19A



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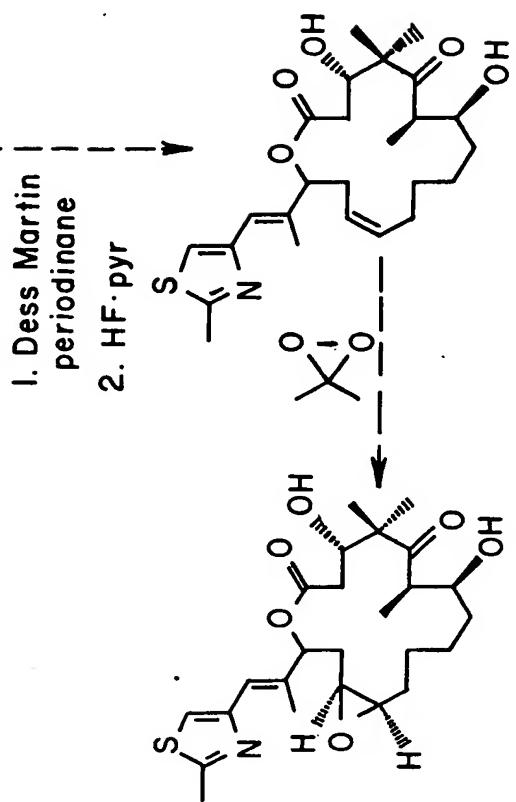
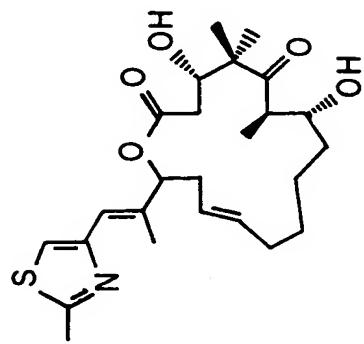


FIG. 19B



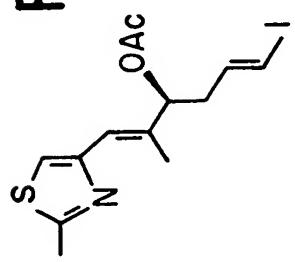


FIG. 19 C

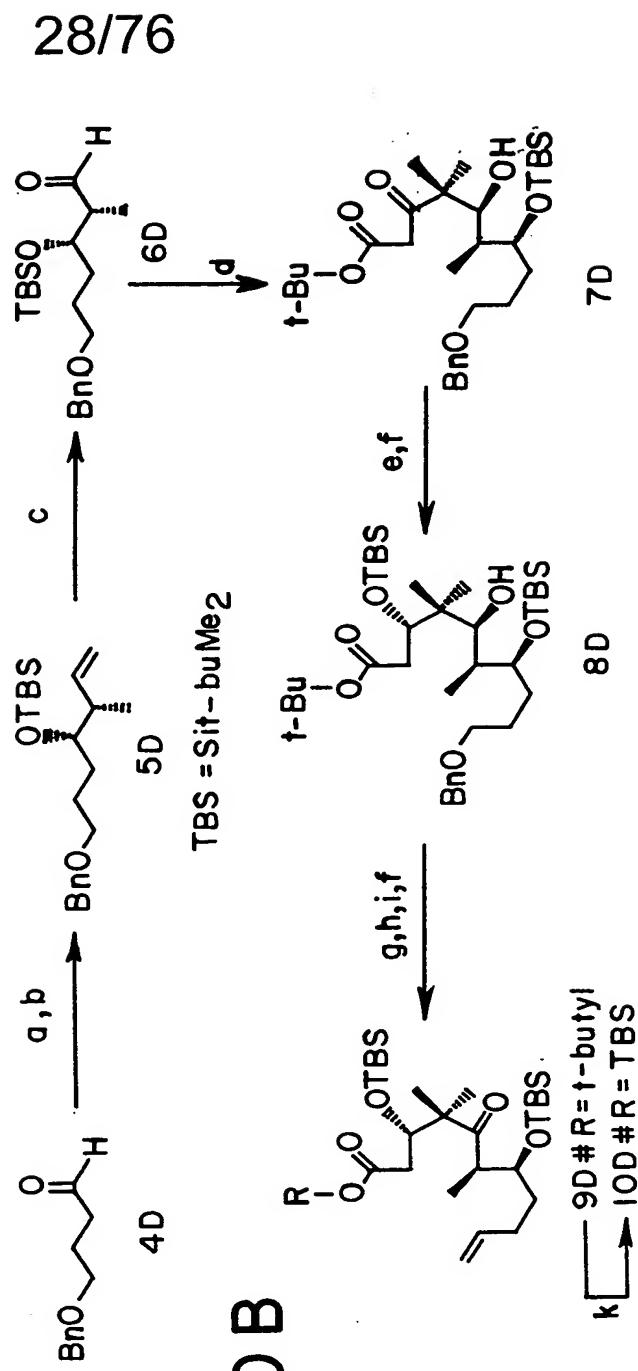
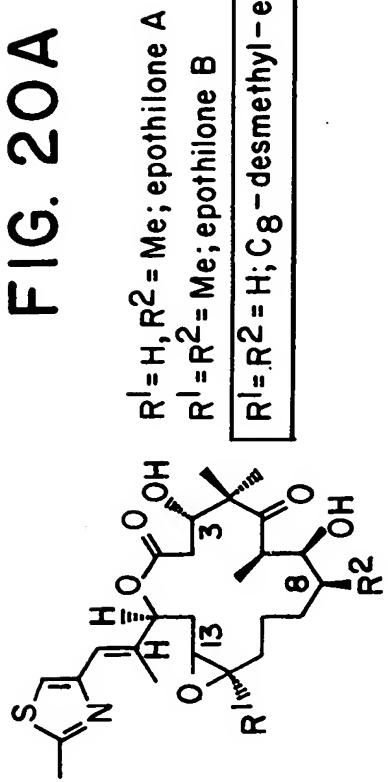
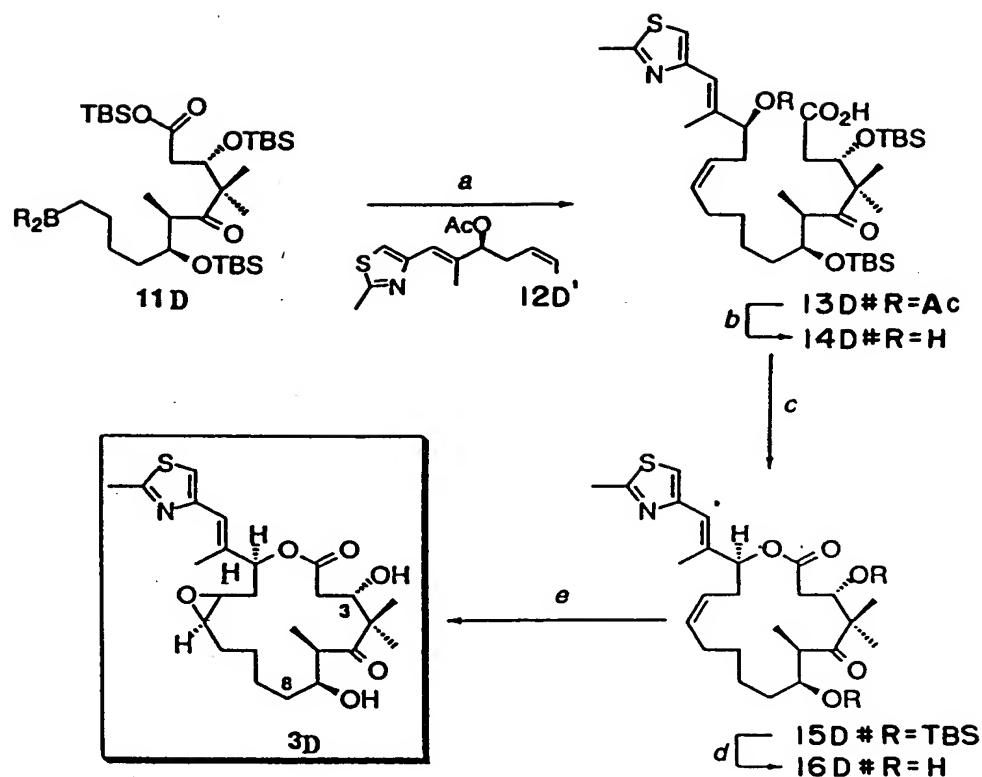


FIG. 20 B

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FIG. 21



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FIG. 22 A

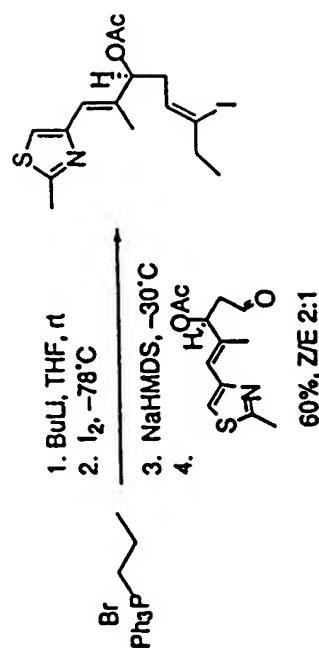
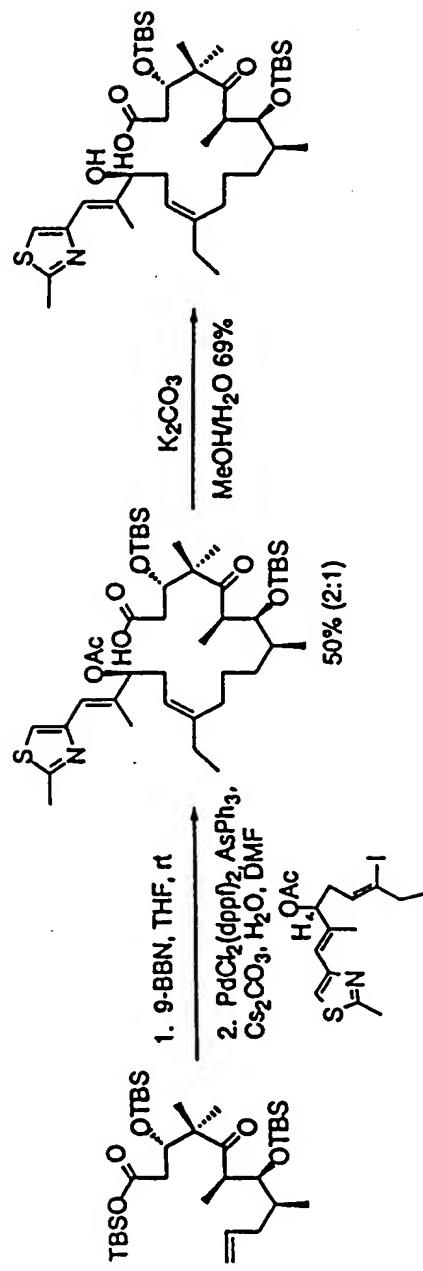


FIG. 22 B



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FIG. 22C

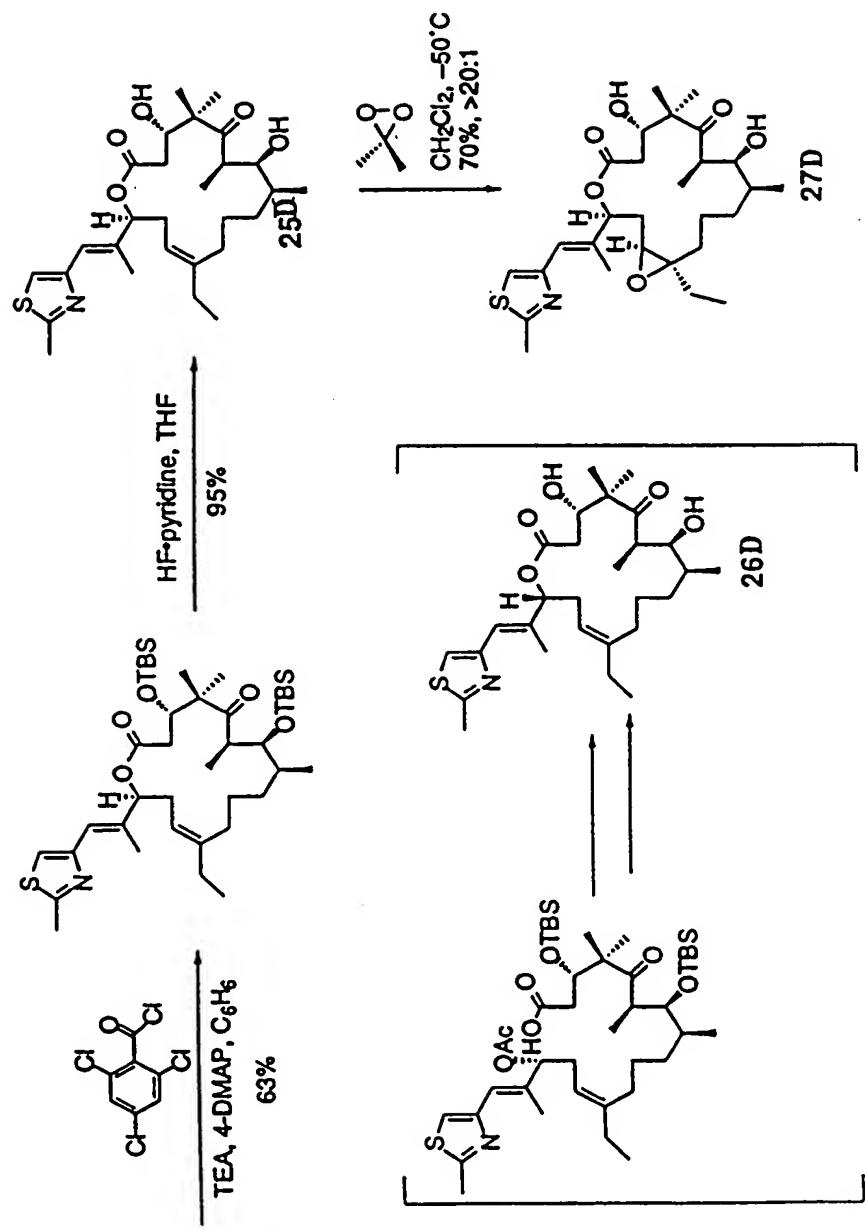


FIG. 23A

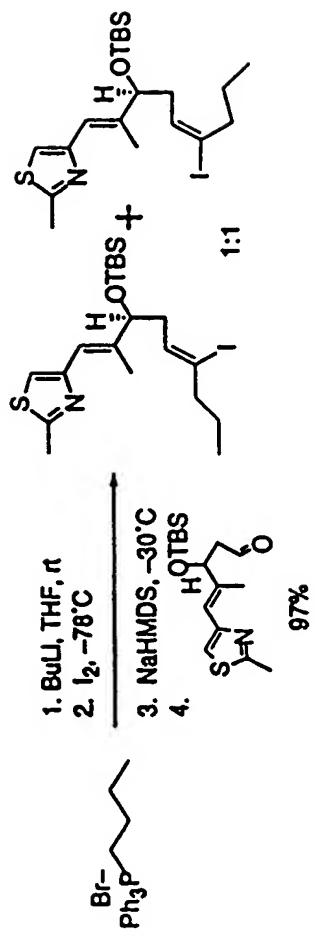
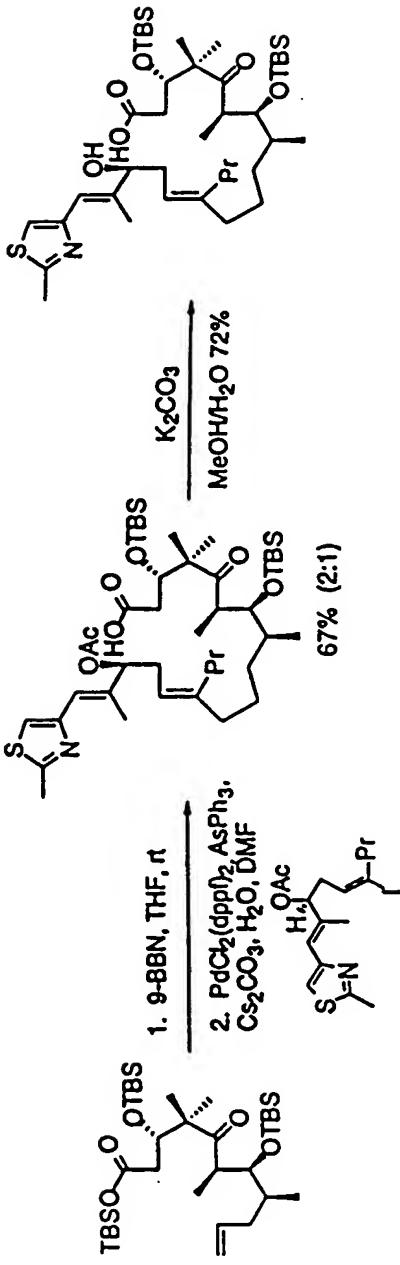


FIG. 23B



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FIG. 23C

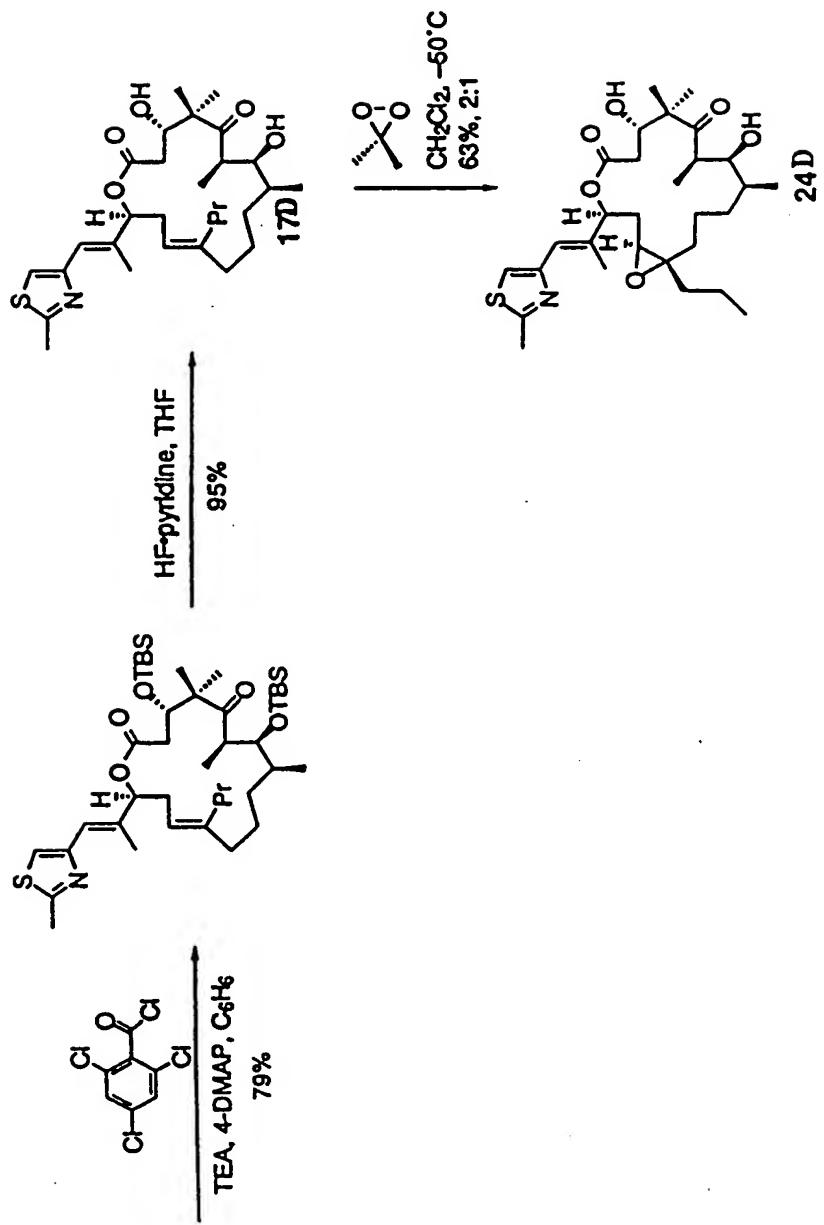


FIG. 24A

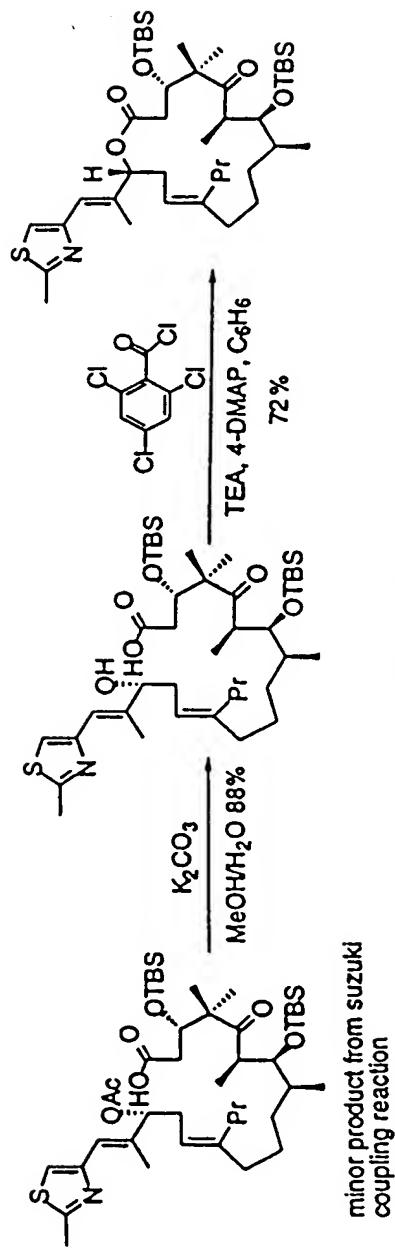


FIG. 24 B

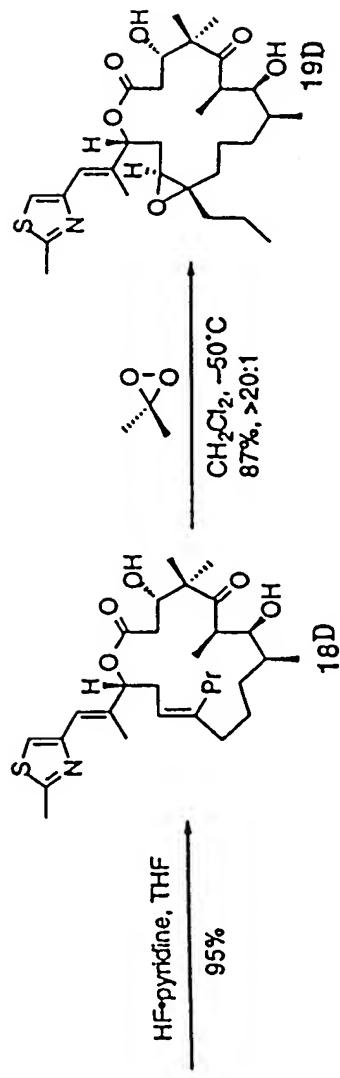


FIG. 25A

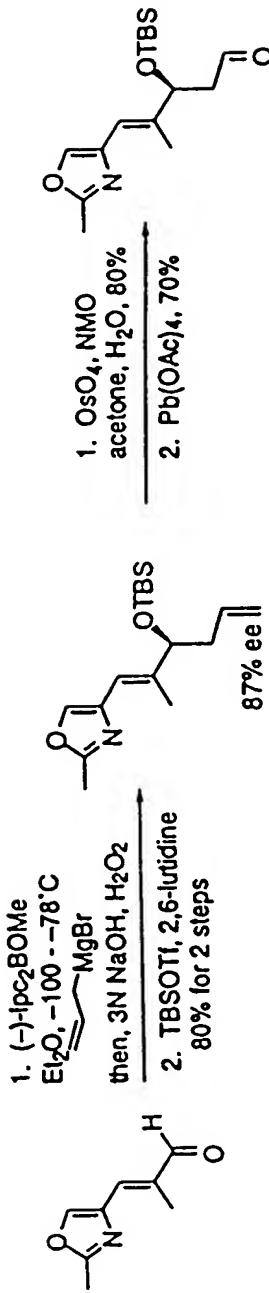


FIG. 25 B

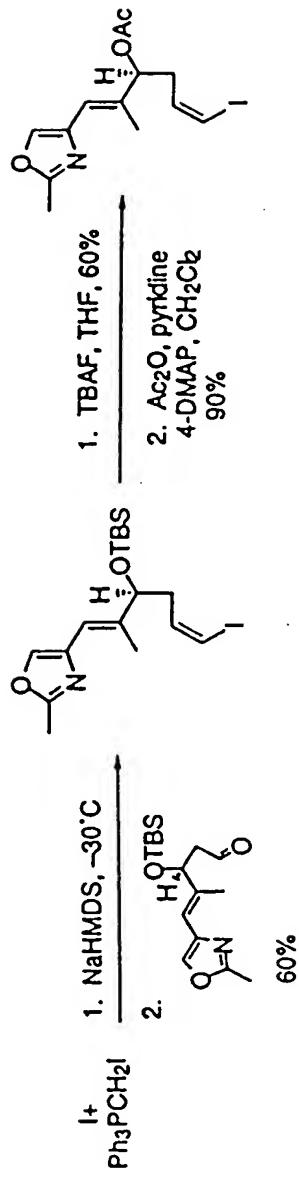


FIG. 25 C

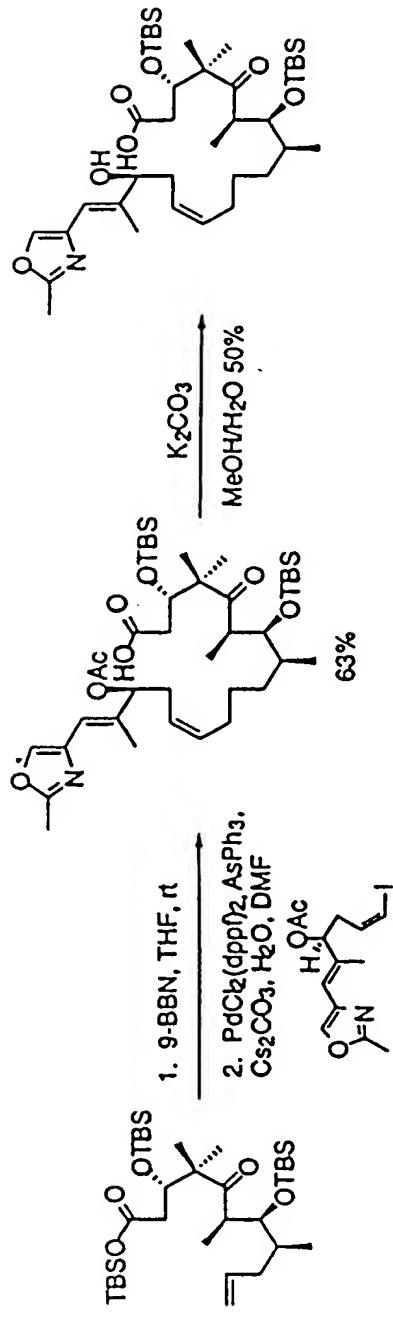


FIG. 25 D

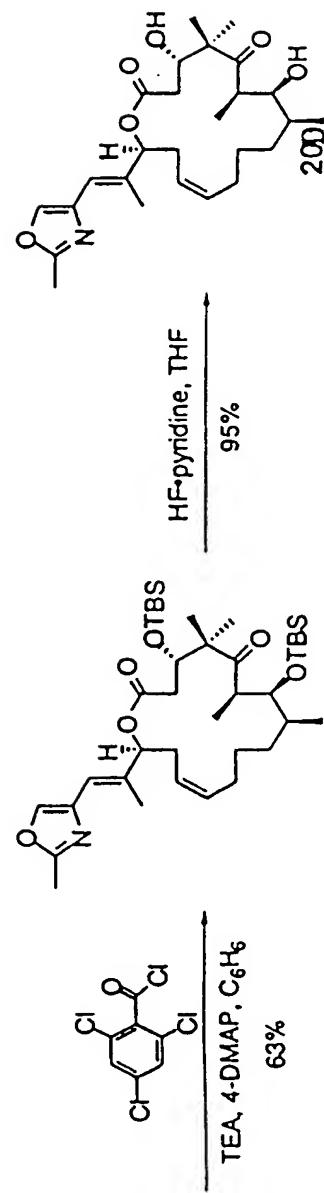


FIG. 26 A

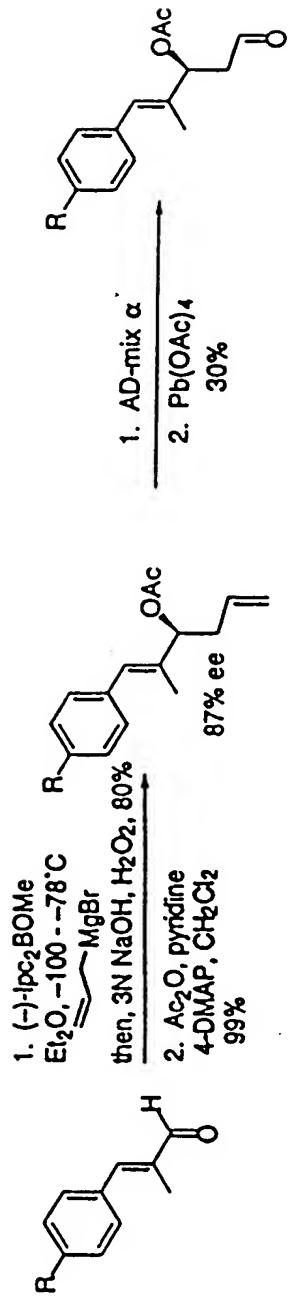
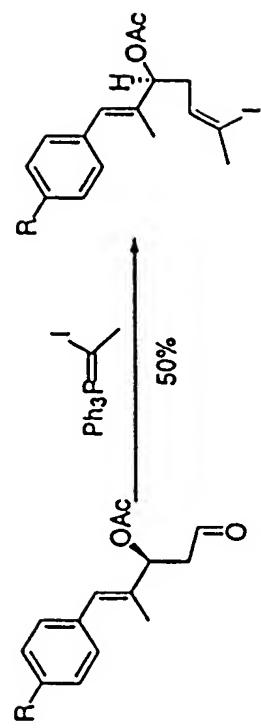


FIG. 26 B



α

1. AD-mix α
2. Pb(OAc)₄
30%

$R = H, F, CF_3$
 $R = H$ is the only compound completed, F and CF_3 are nearly completed

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FIG. 26C

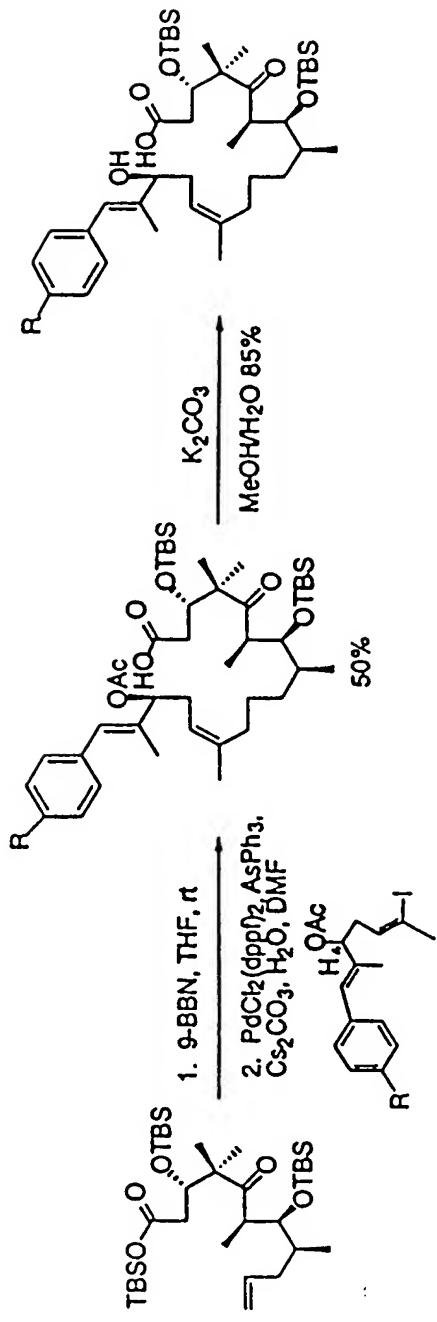


FIG. 26D

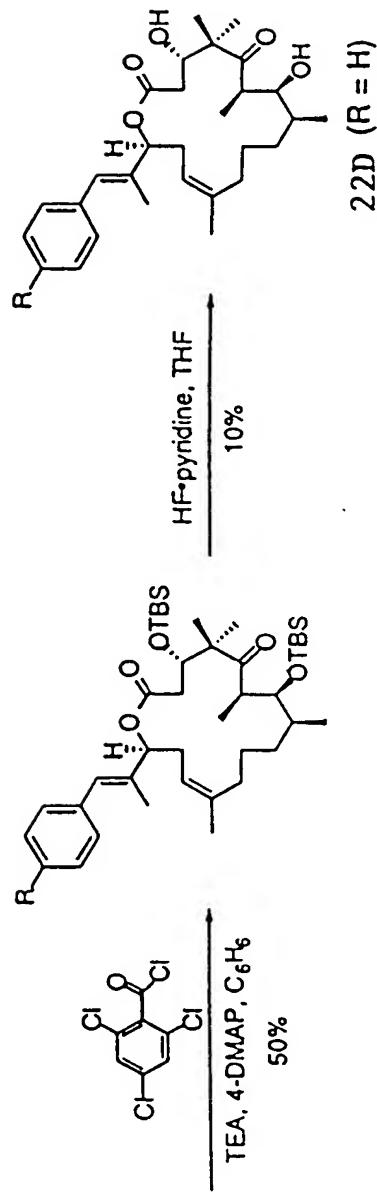


FIG. 27A

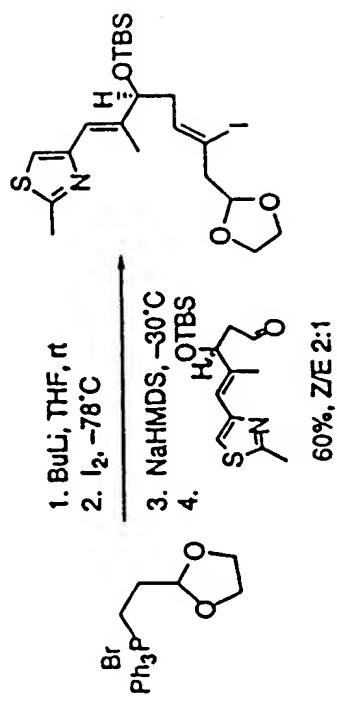
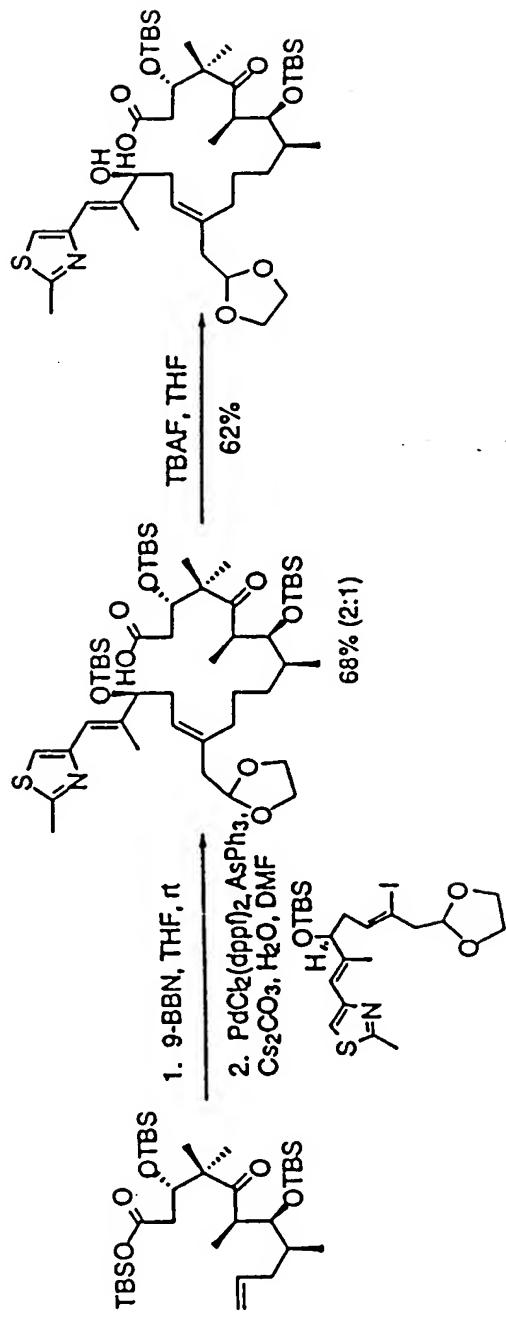
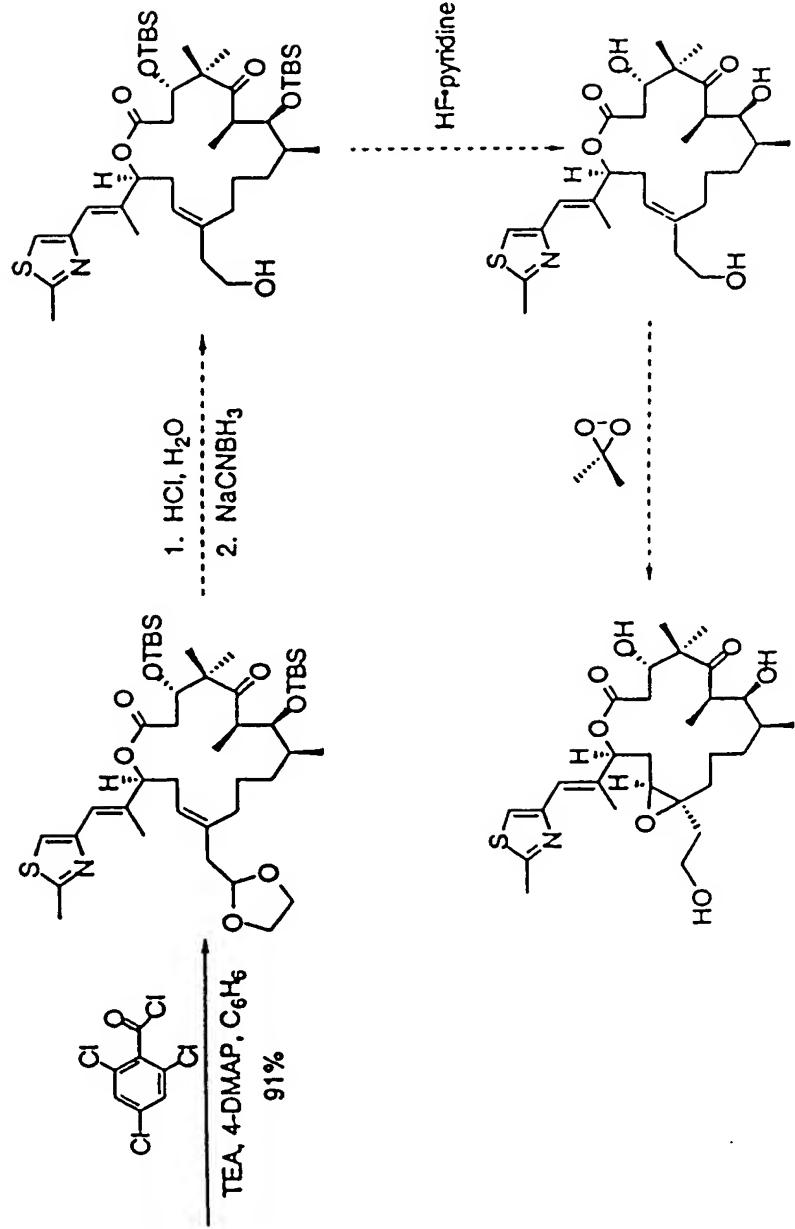


FIG. 27B



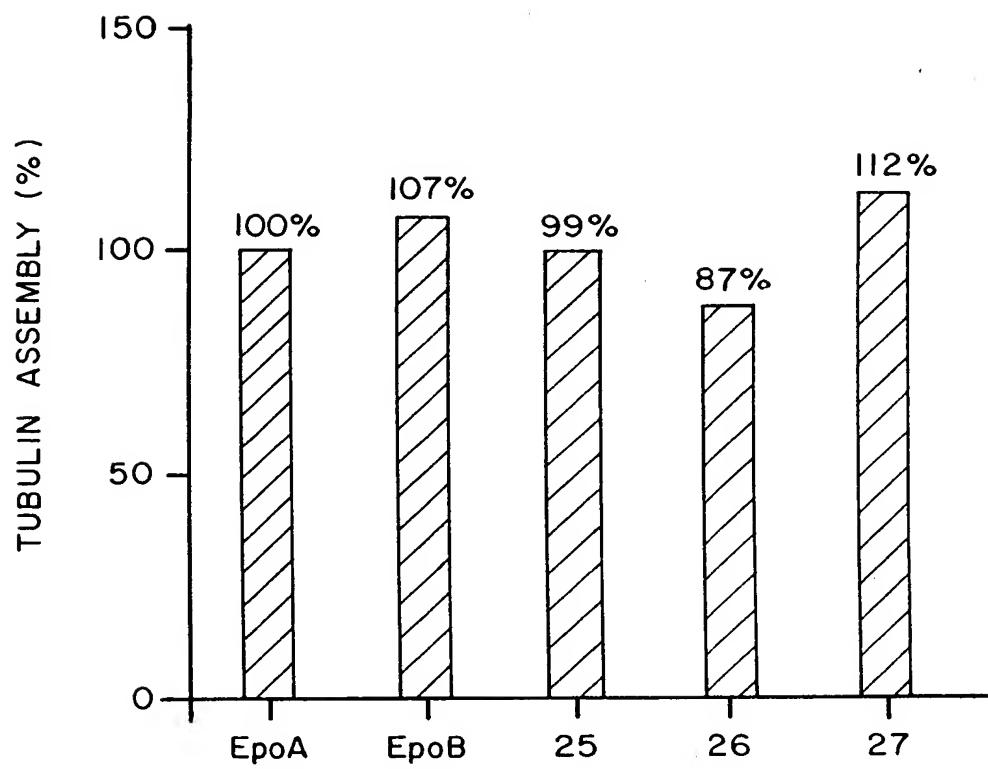
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FIG. 27C



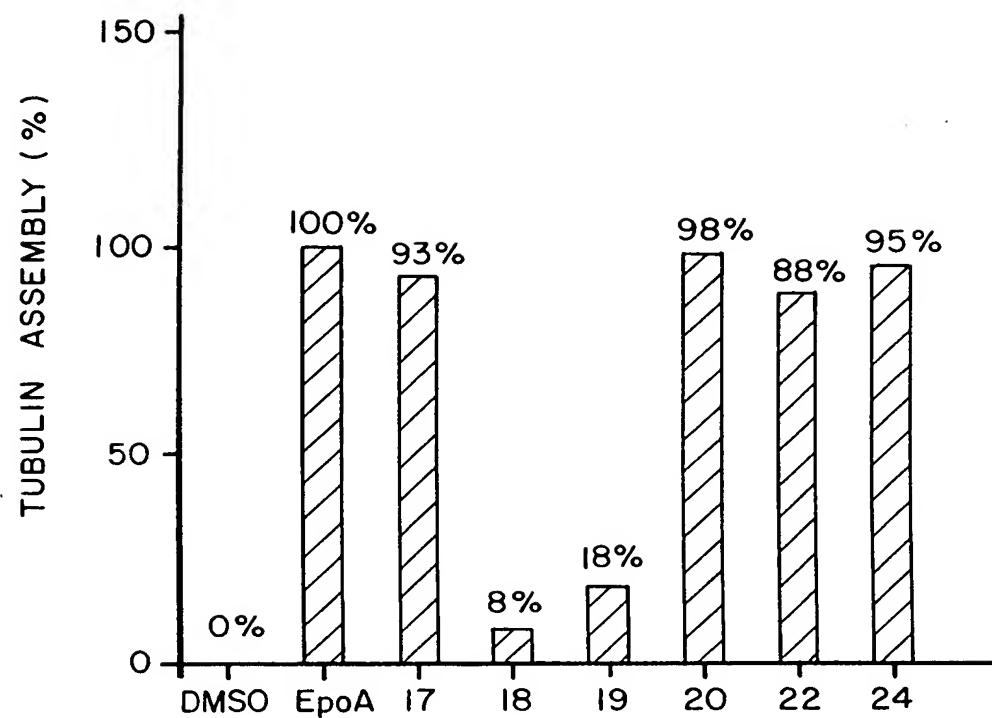
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FIG. 28A



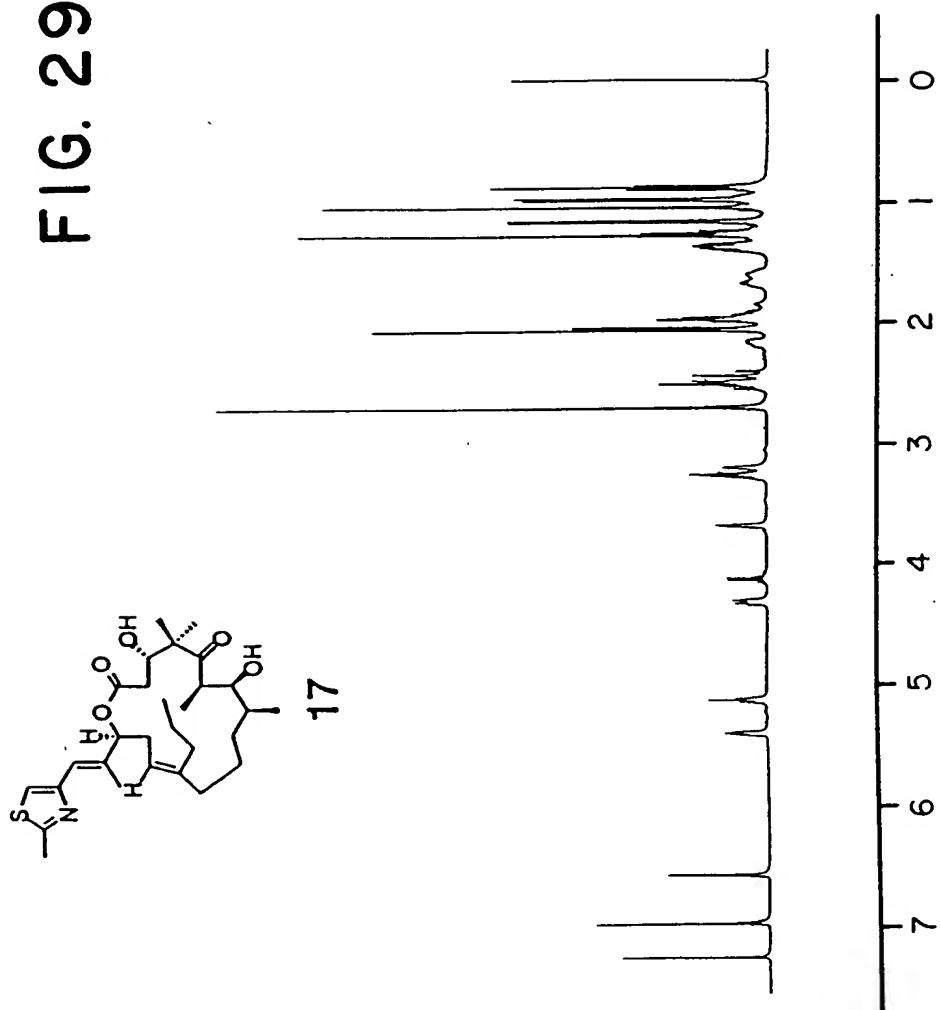
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FIG. 28B



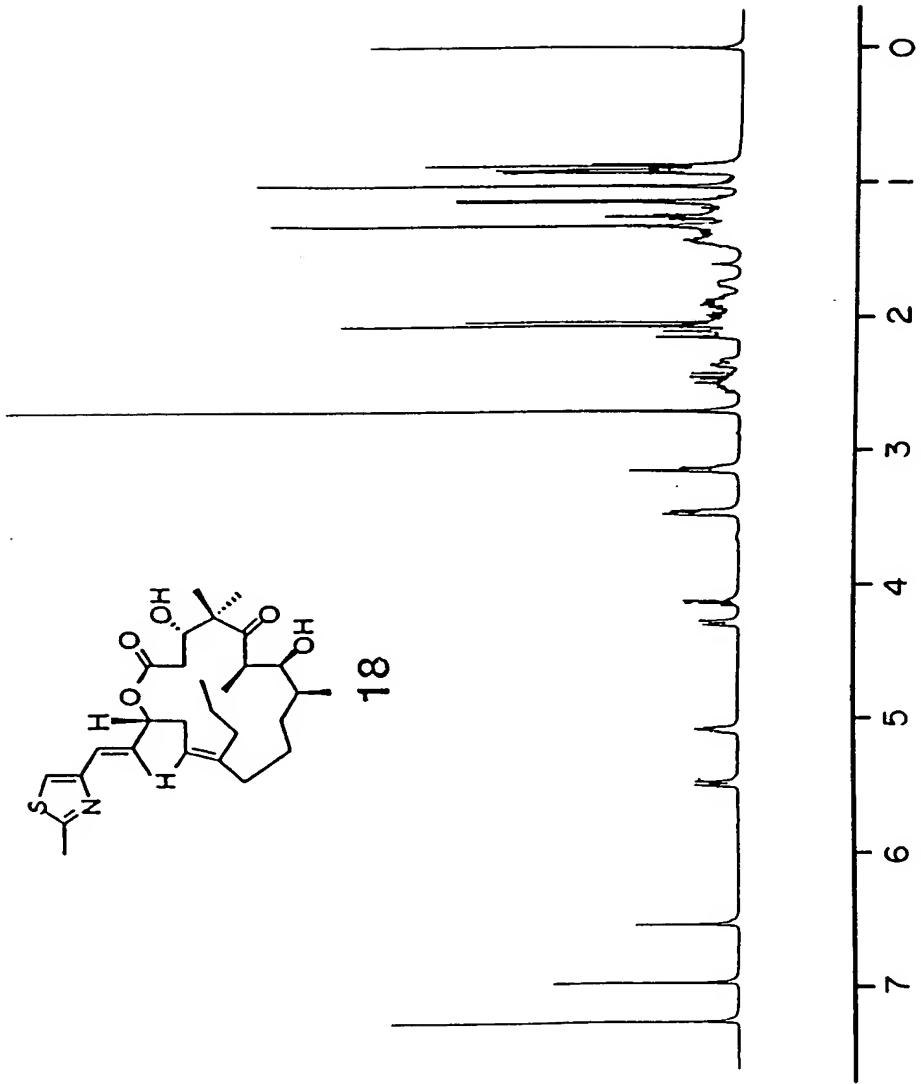
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FIG. 29



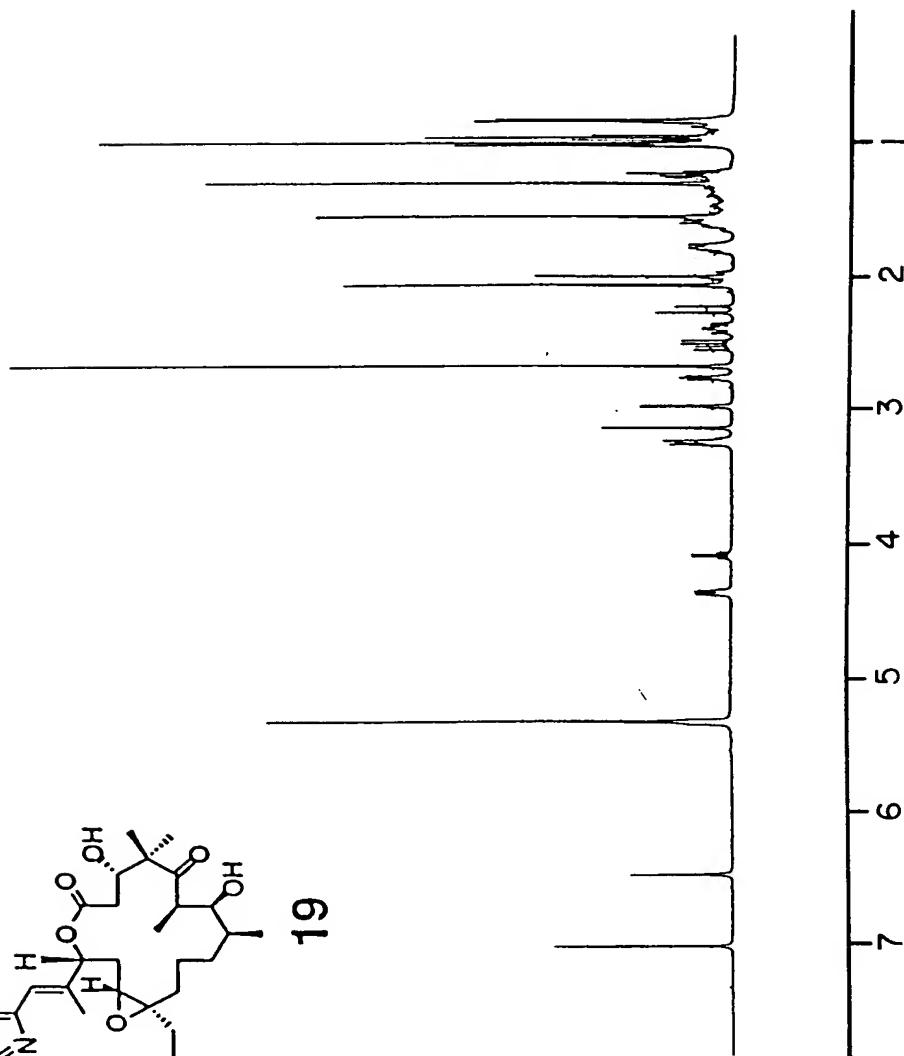
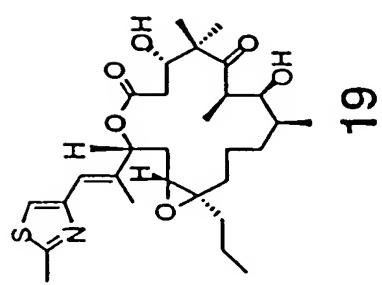
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FIG. 30



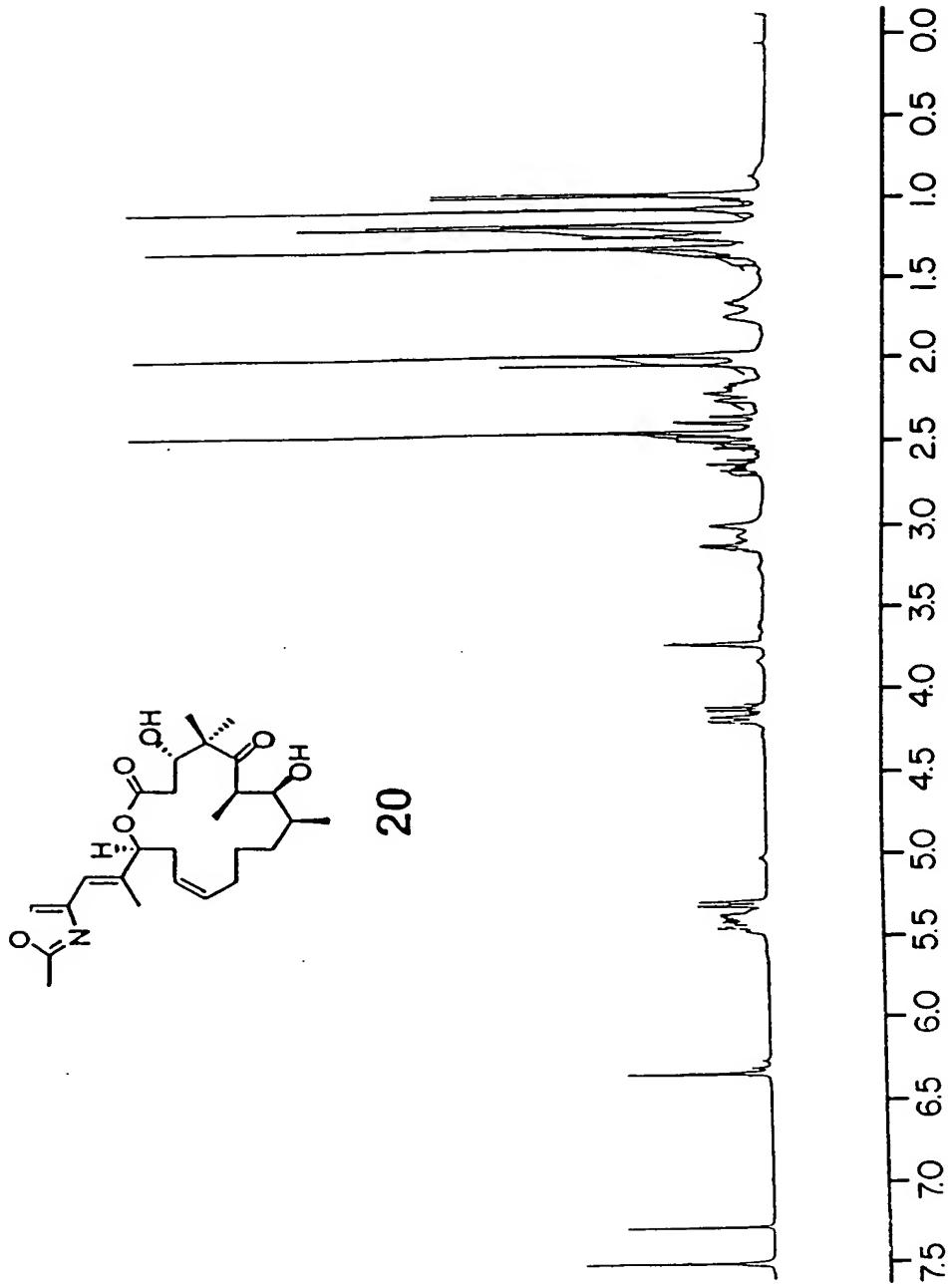
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FIG. 3 |



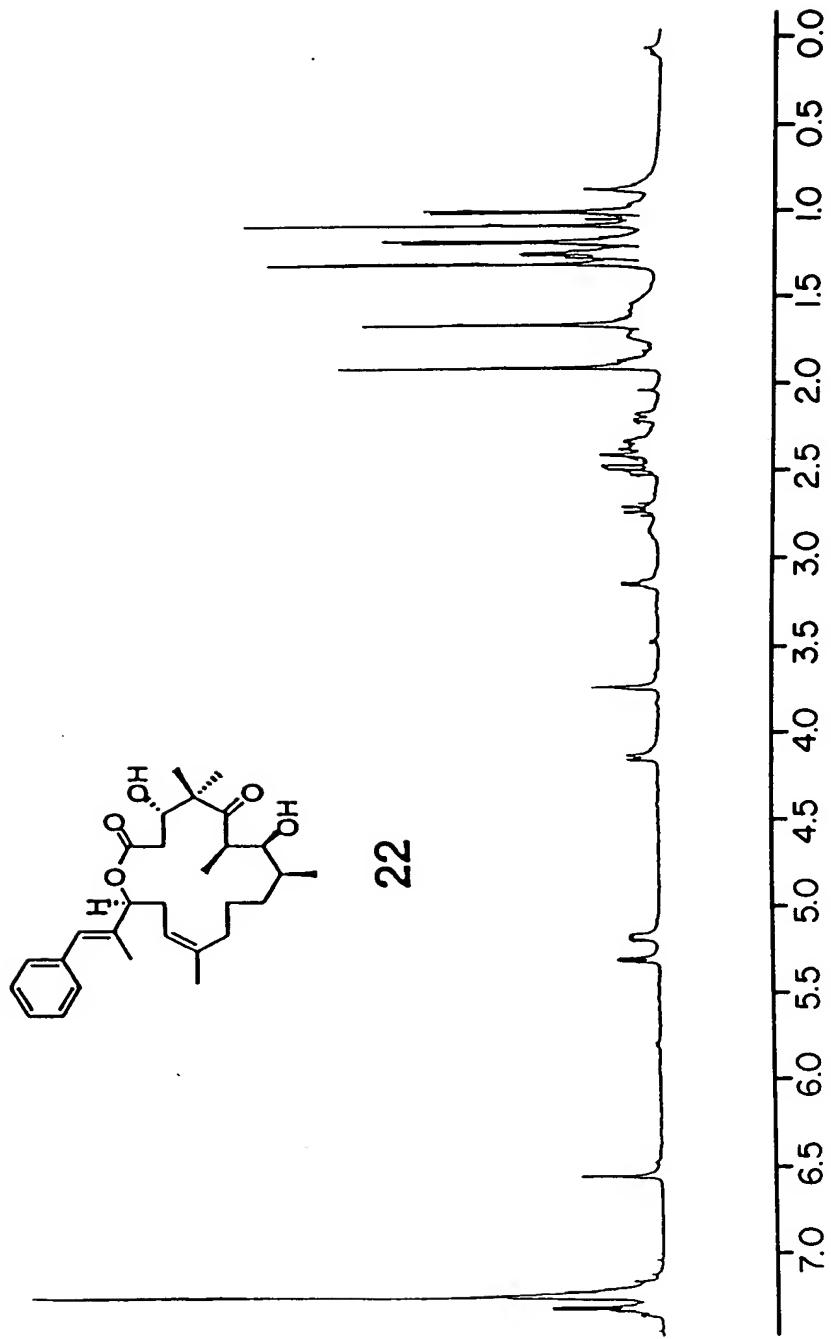
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FIG. 32



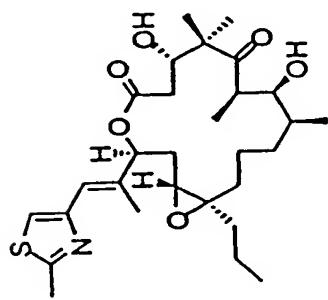
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FIG. 33

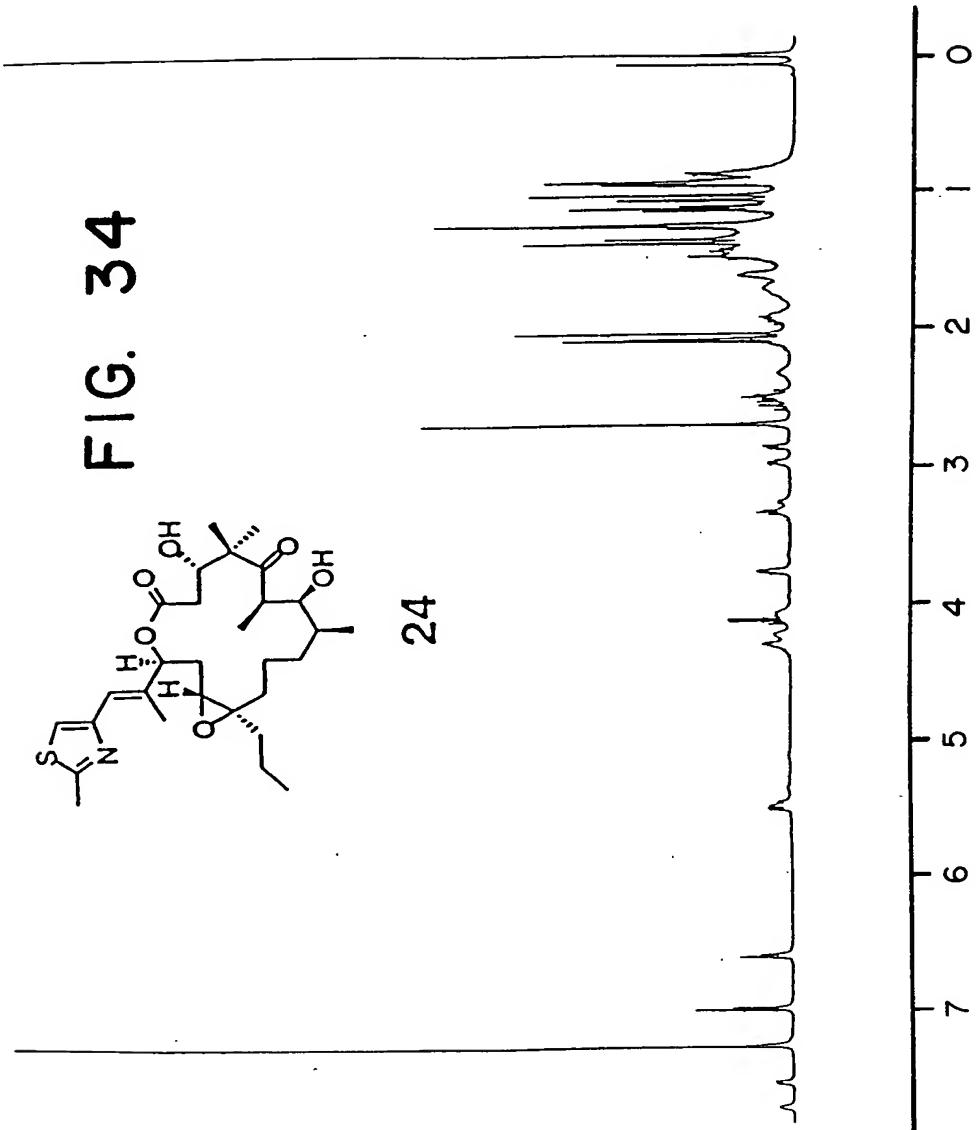


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FIG. 34

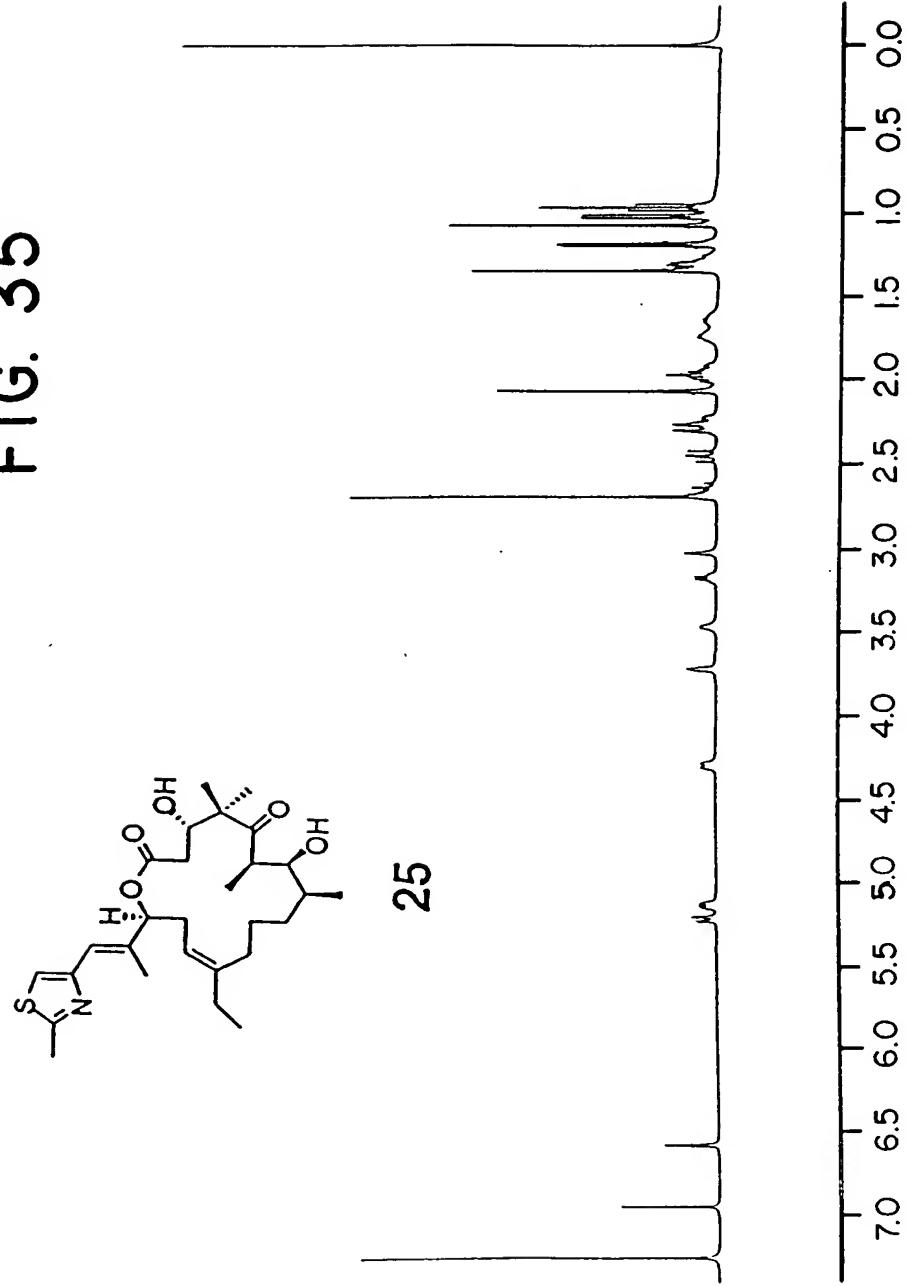


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FIG. 35



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FIG. 36

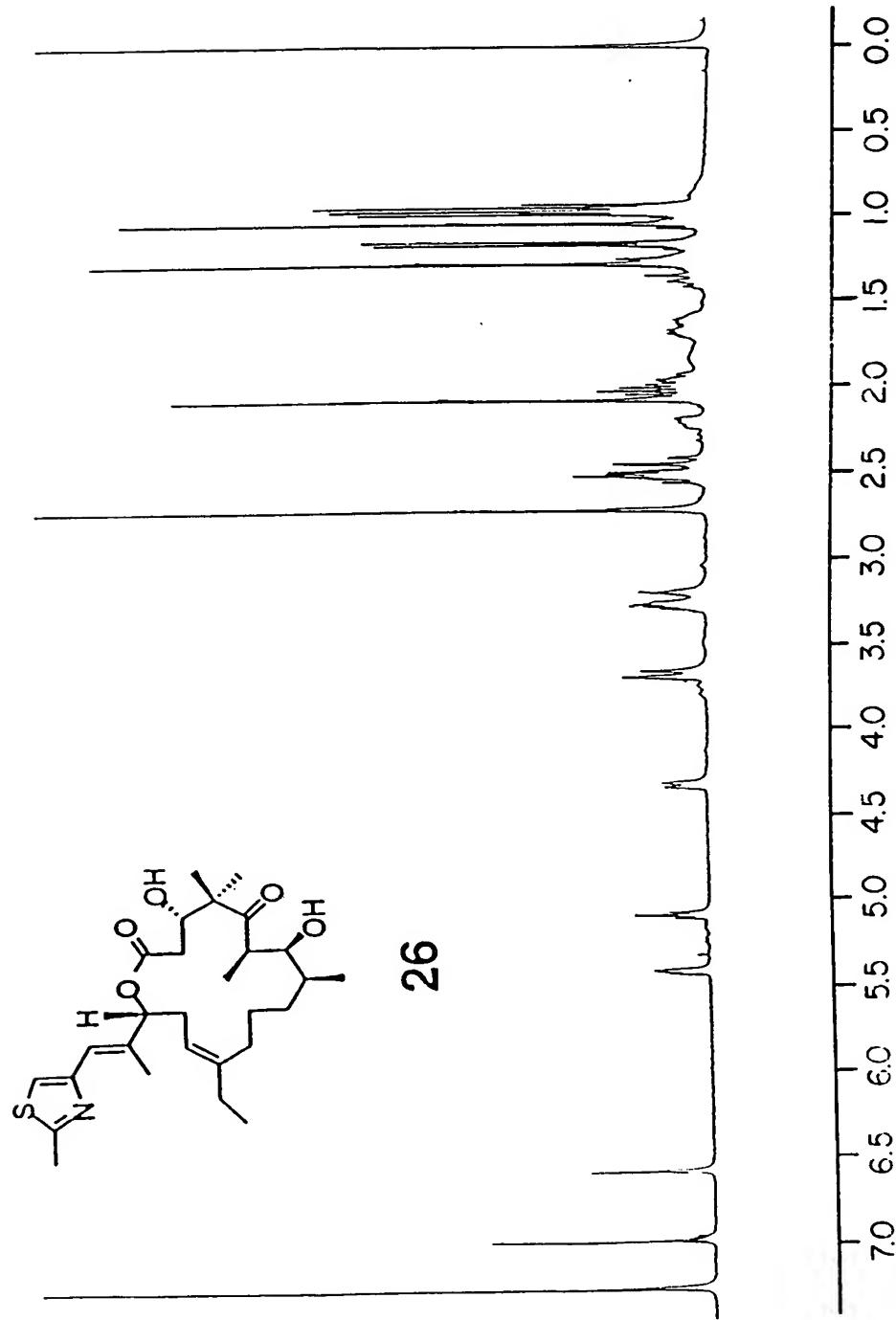
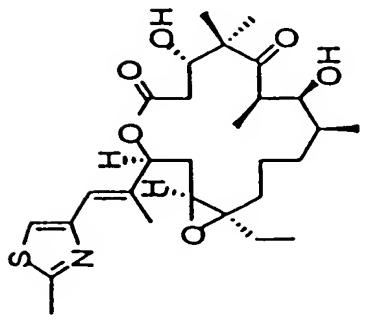
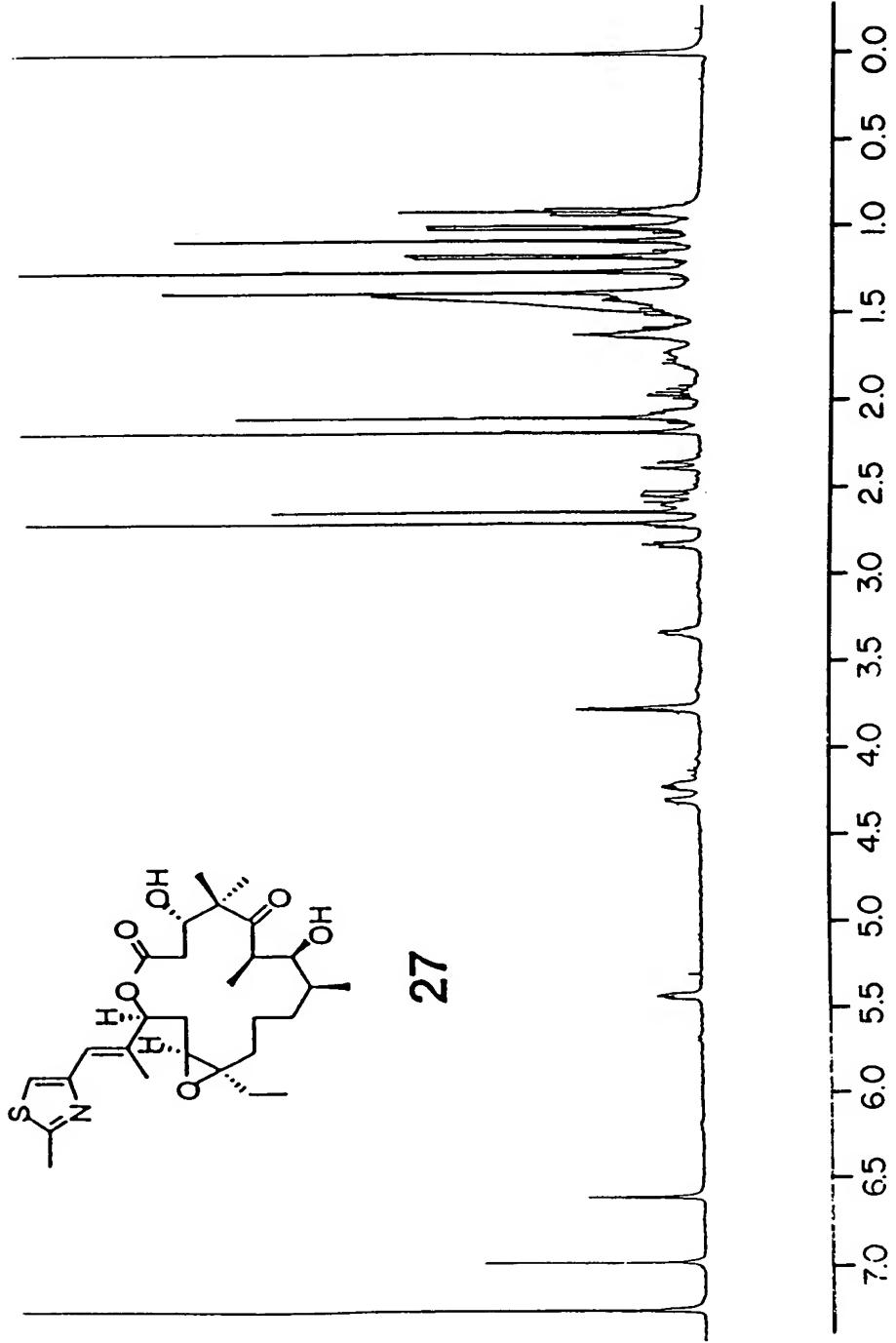


FIG. 37



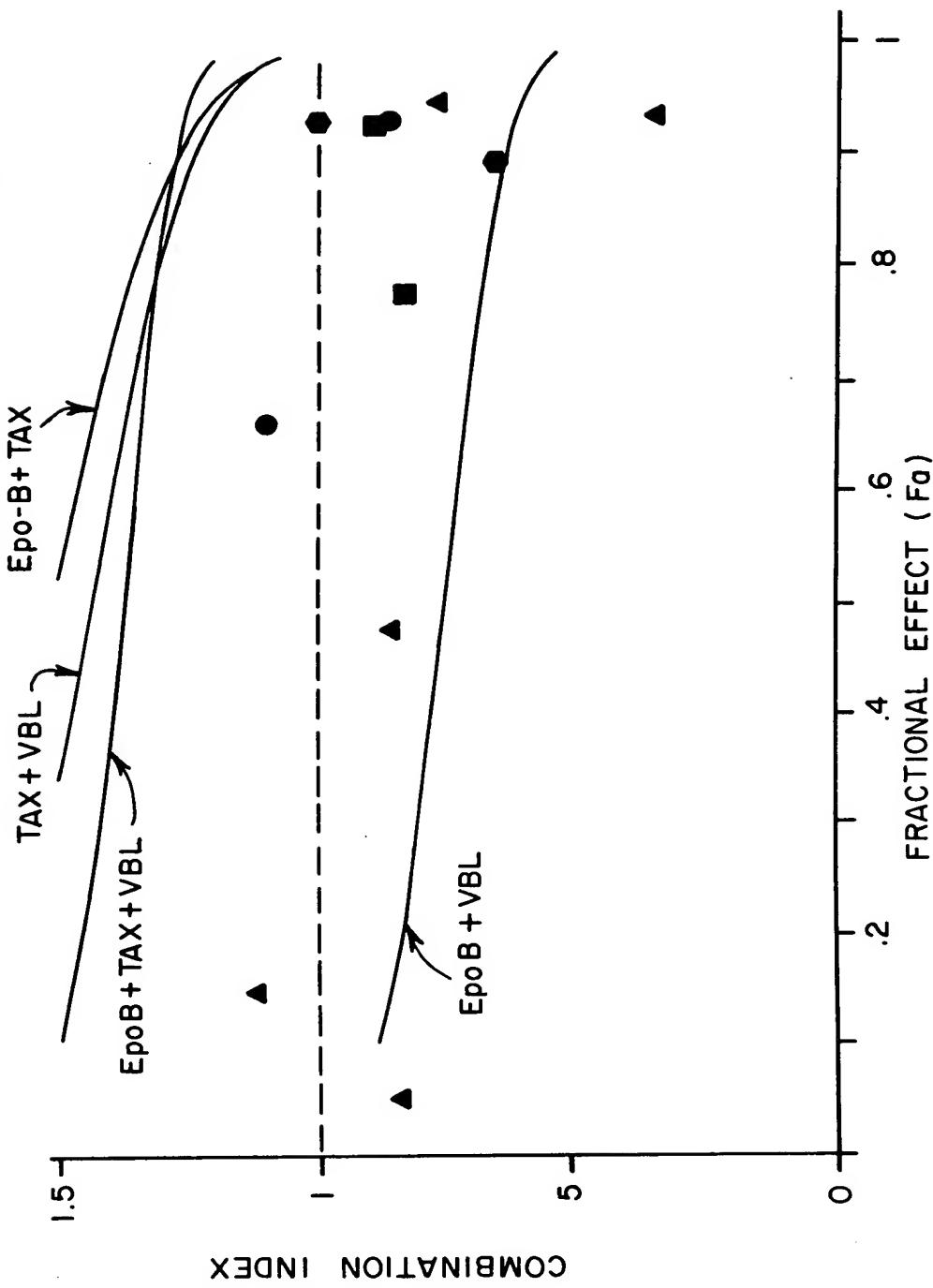
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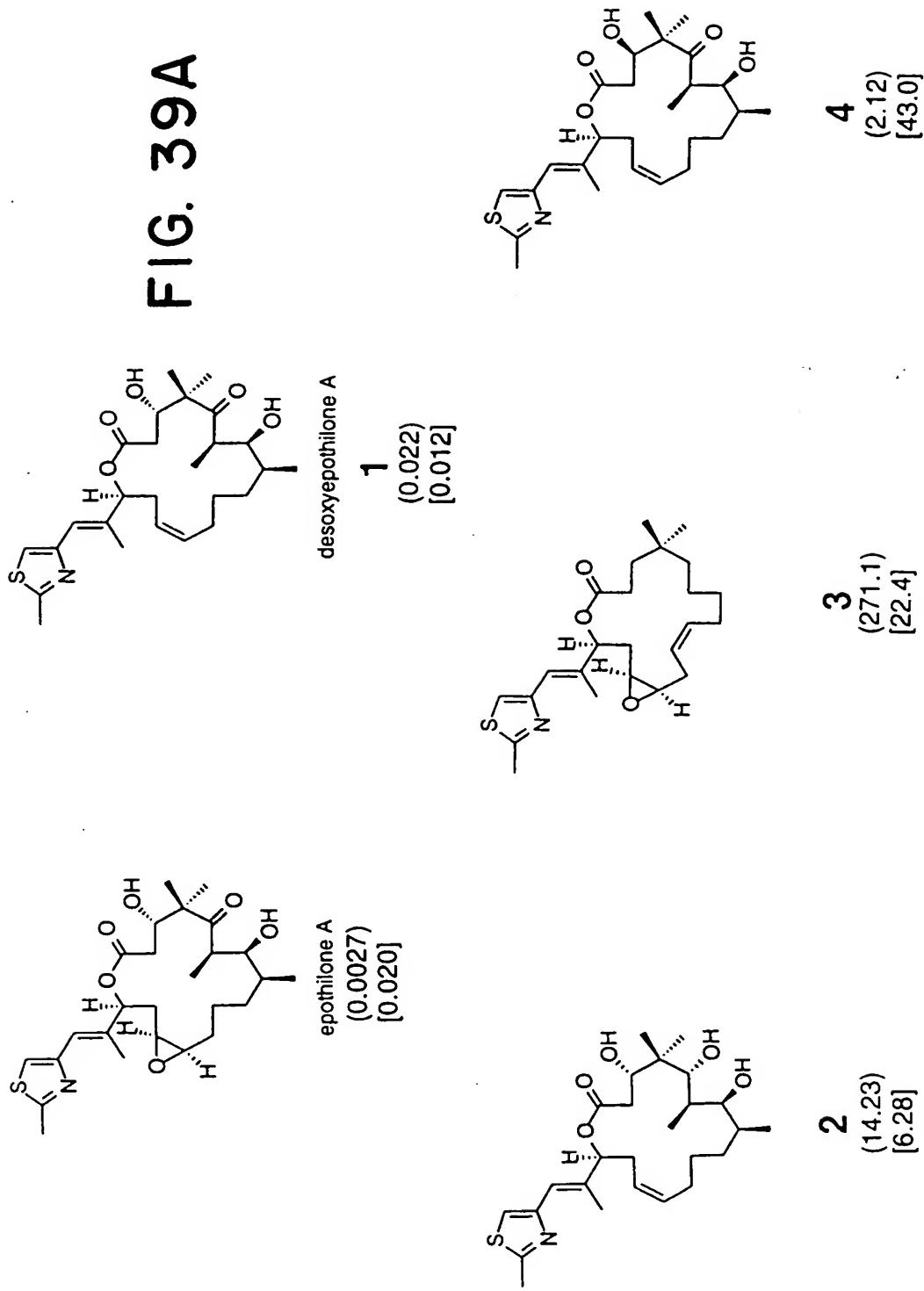
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FIG. 38



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FIG. 39A



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FIG. 39 B

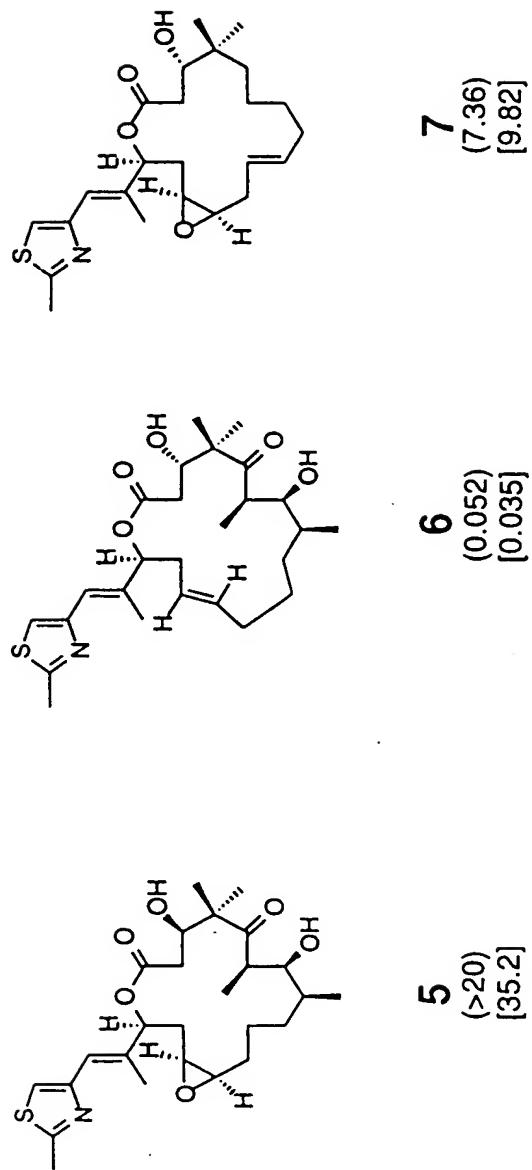


FIG. 40A

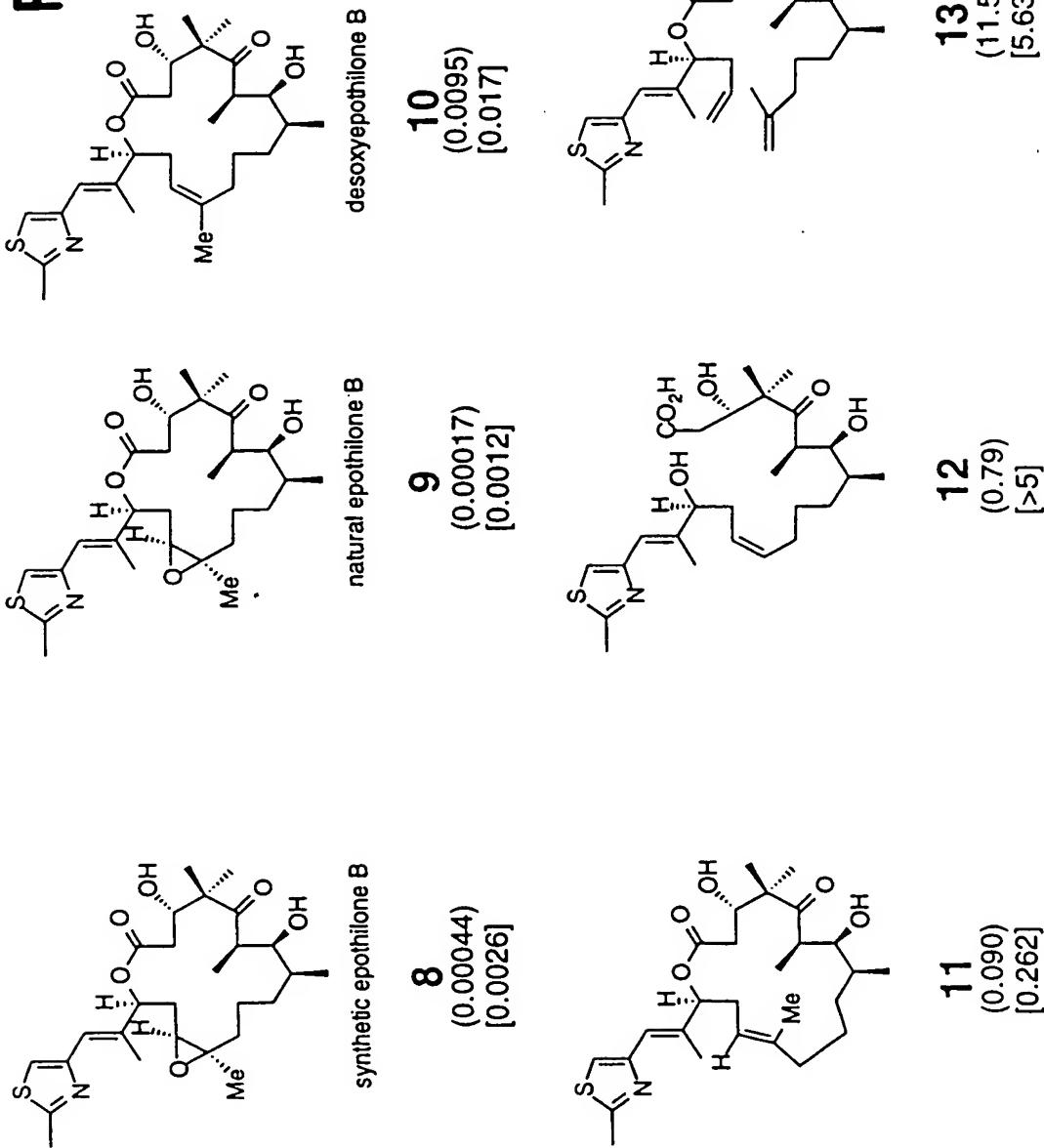
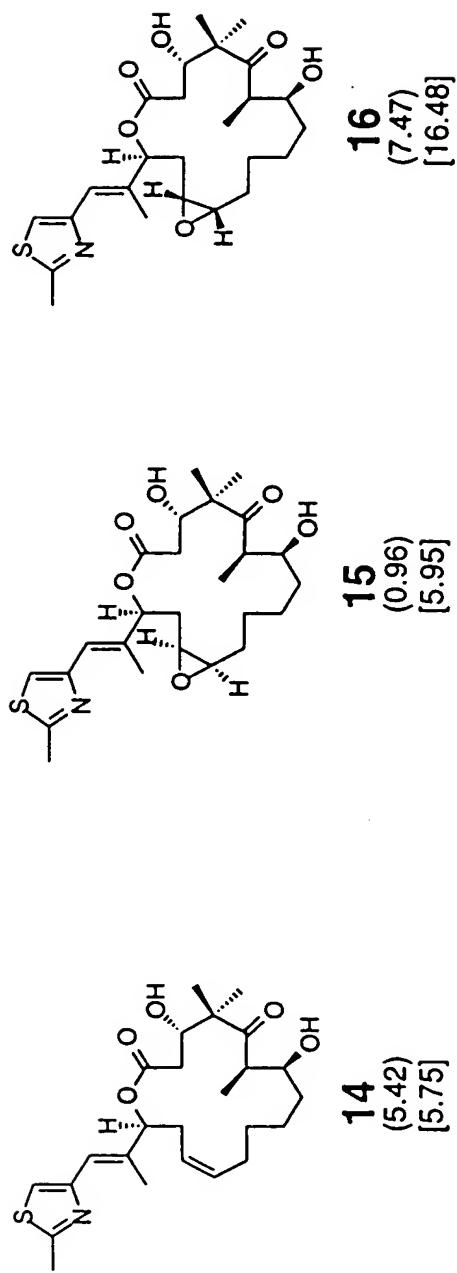


FIG. 40 B



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FIG. 4 | A

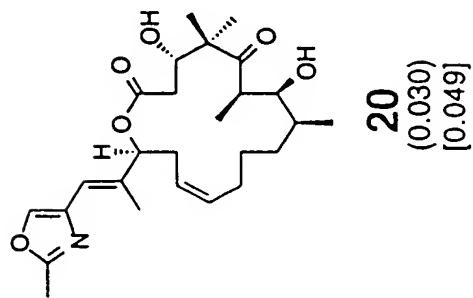
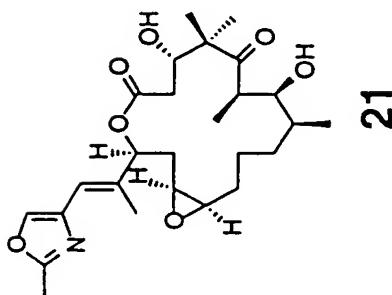
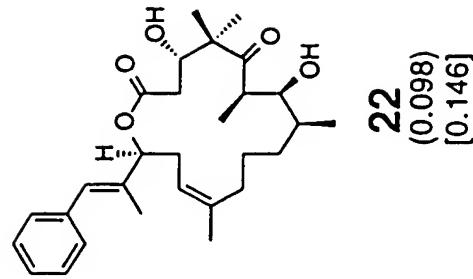
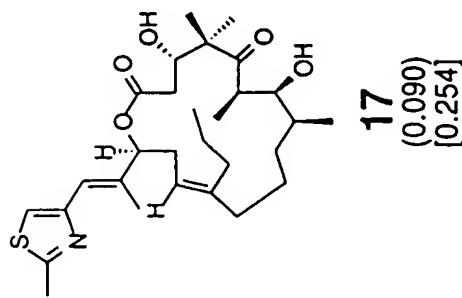
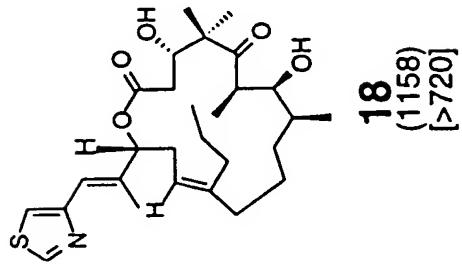
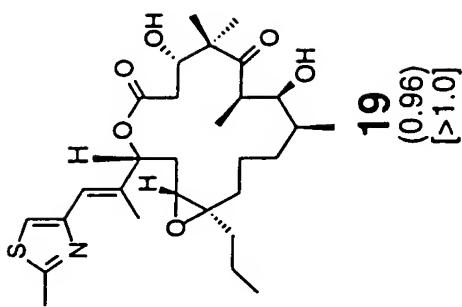
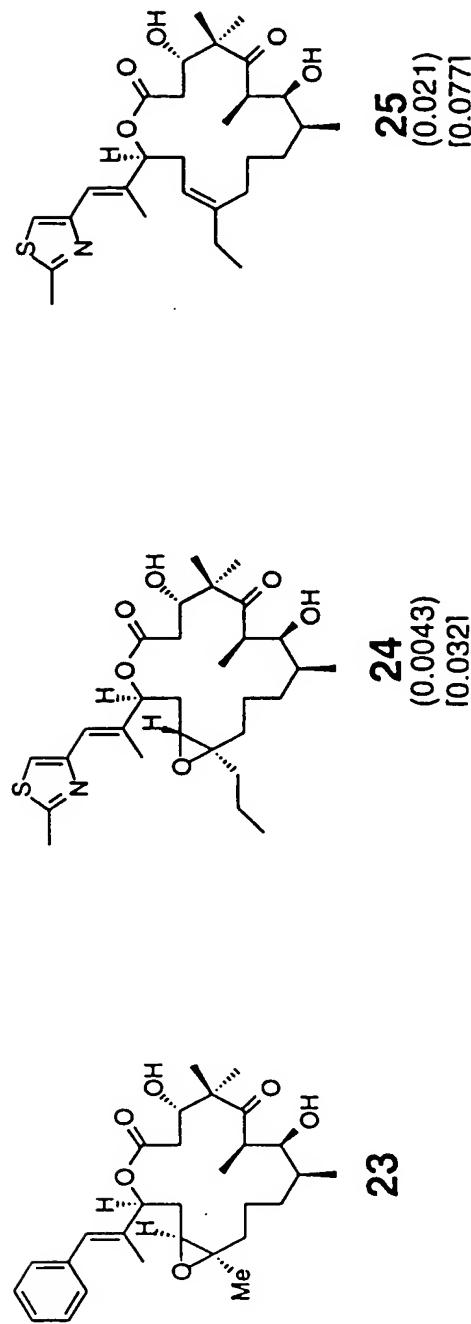


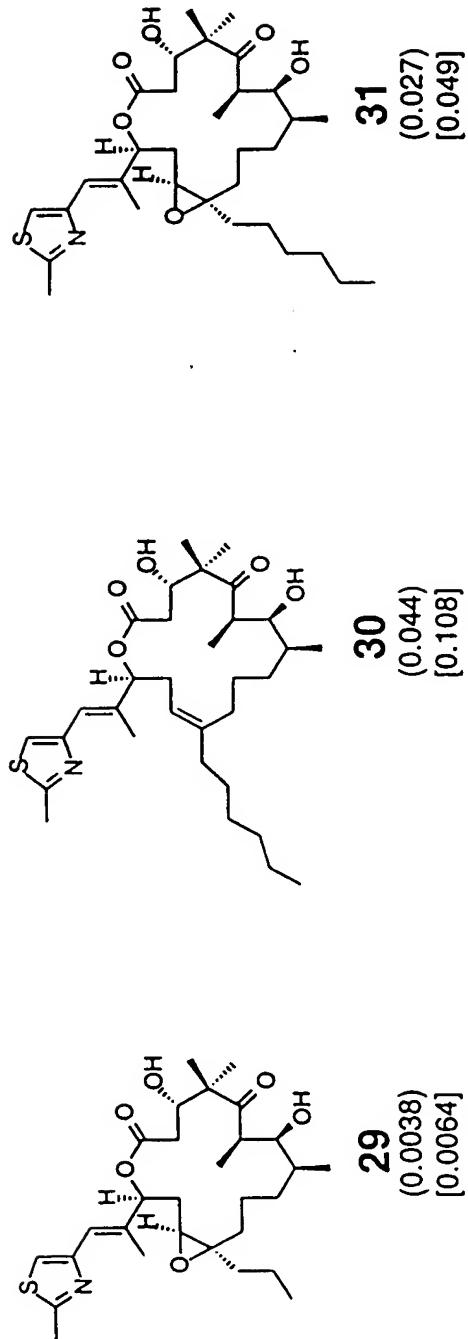
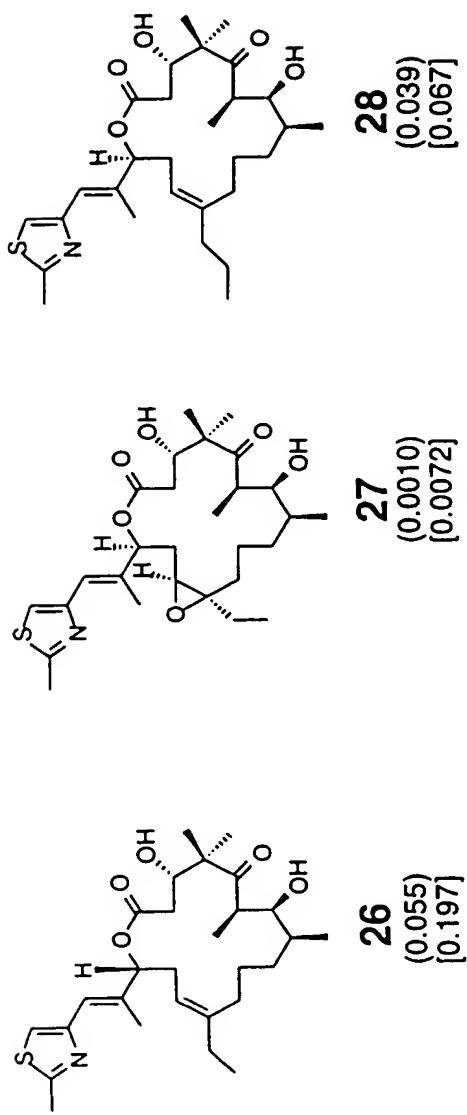
FIG. 4 | B

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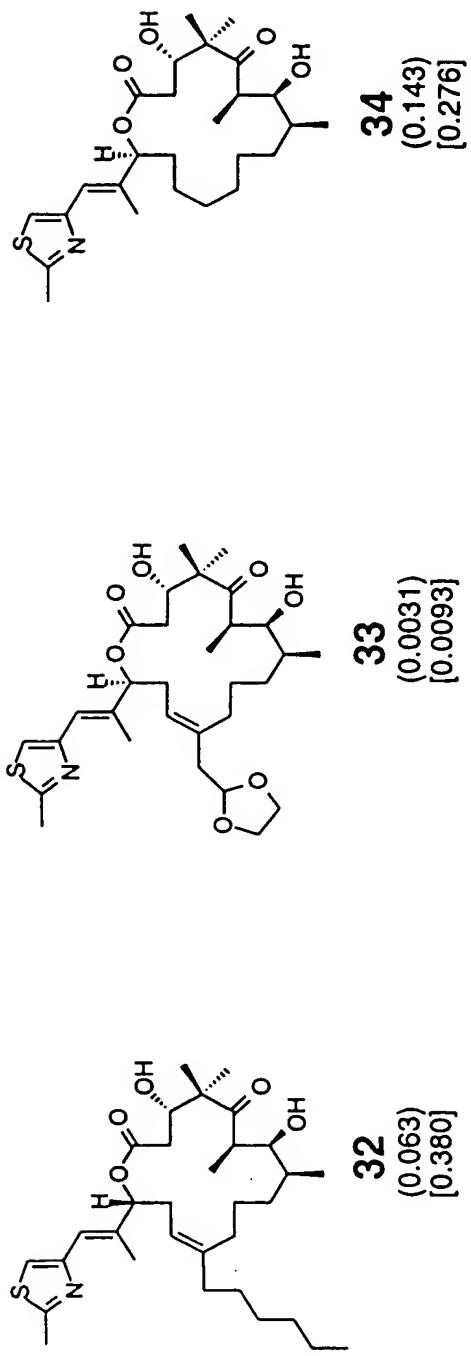
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FIG. 42A



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FIG. 42 B



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FIG. 42 C

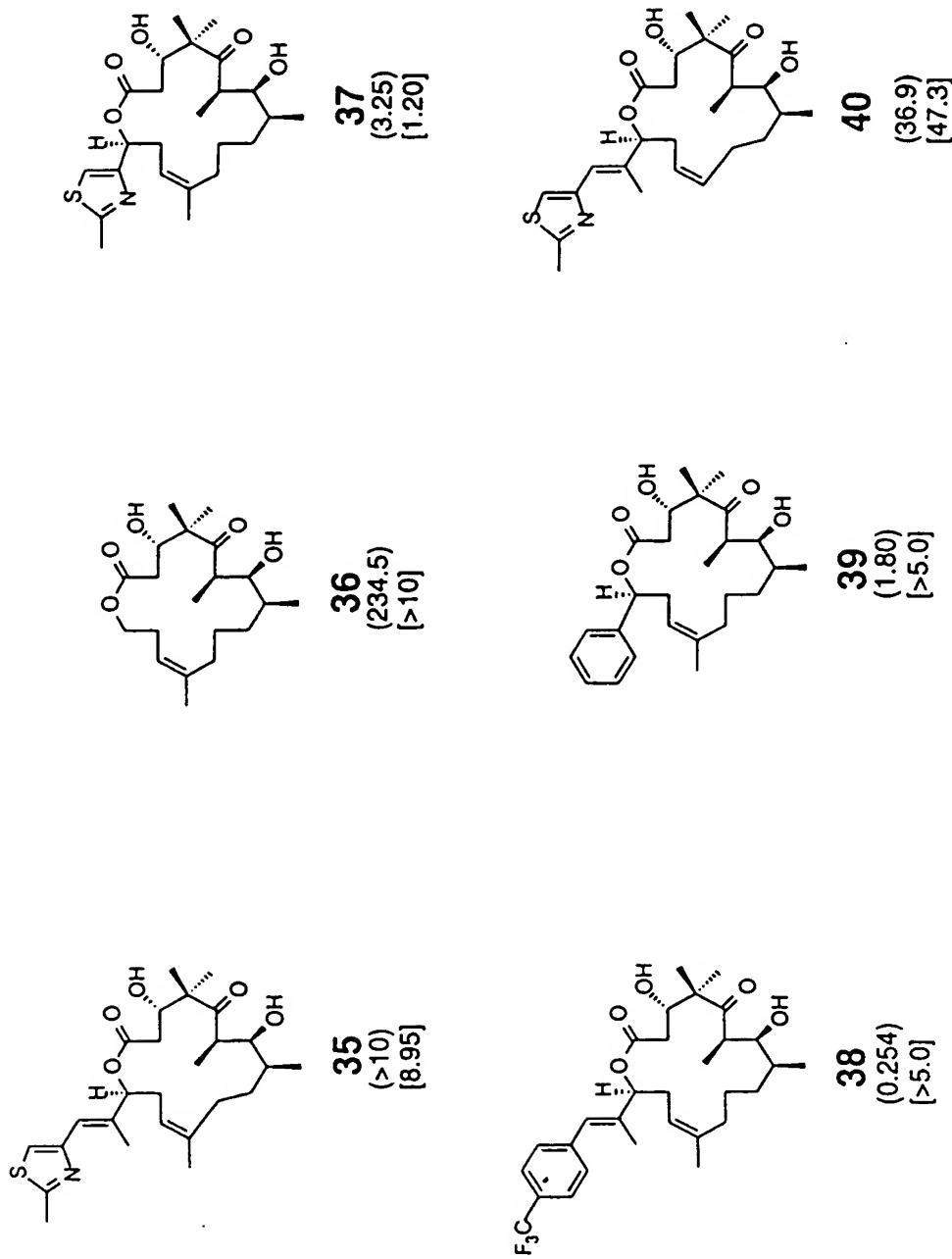
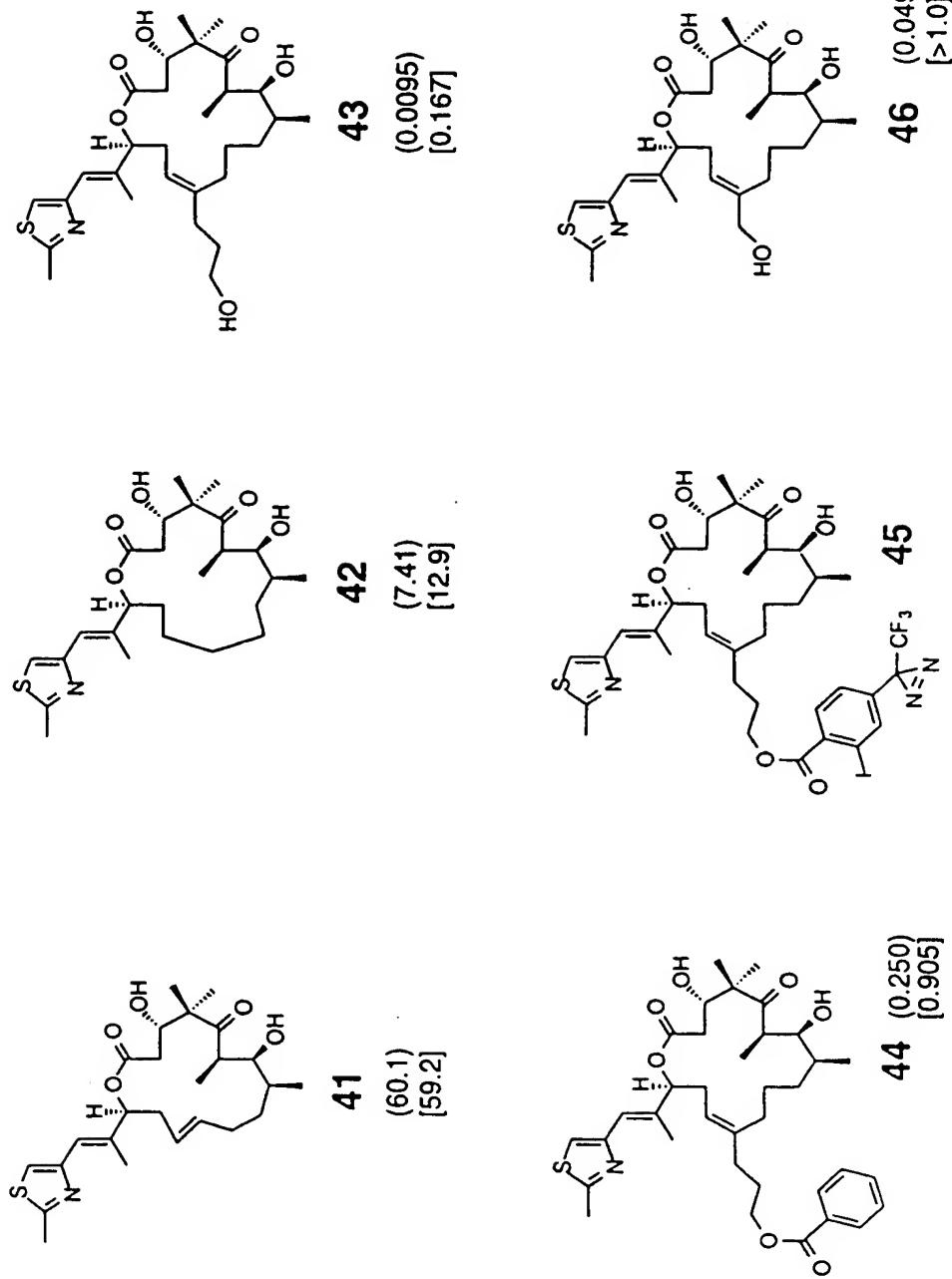


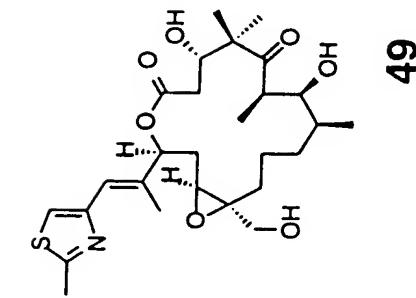
FIG. 42 D

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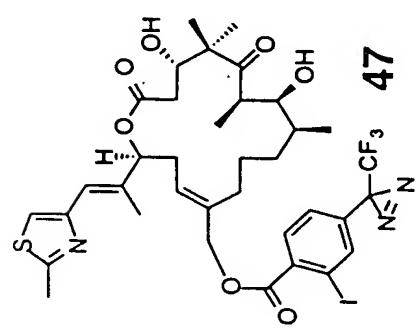
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FIG. 42 E



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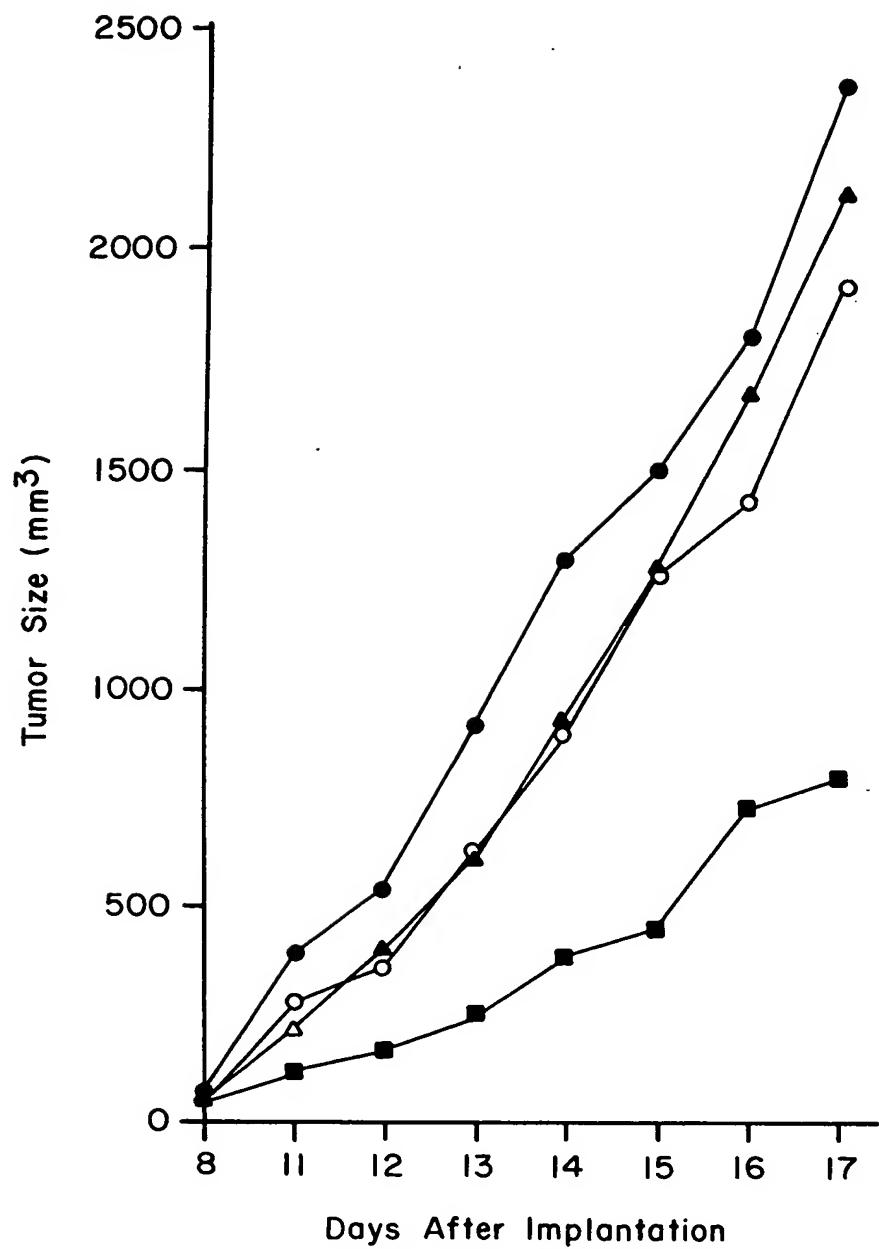
48 R = (CH₂)₃OH



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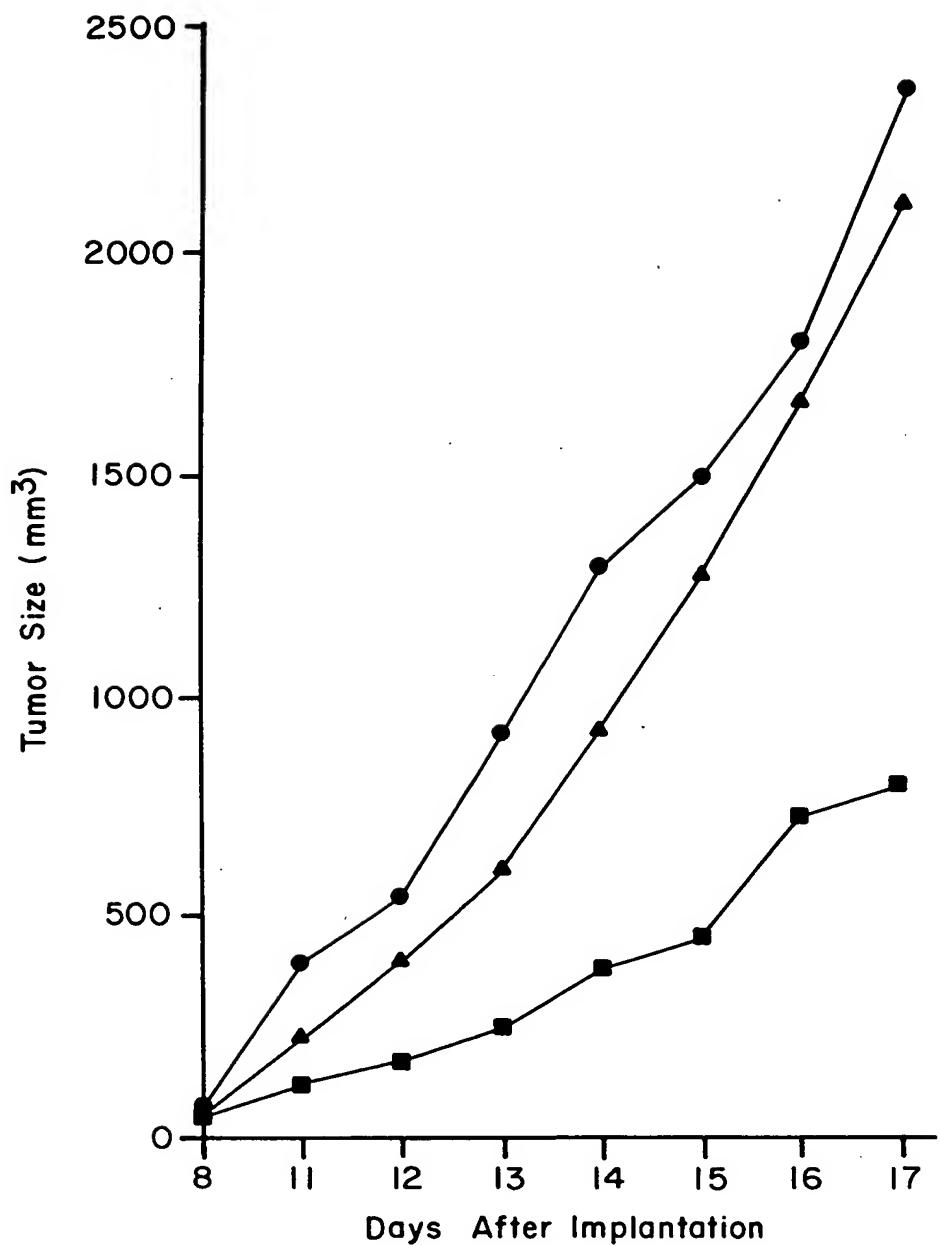
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FIG. 43A



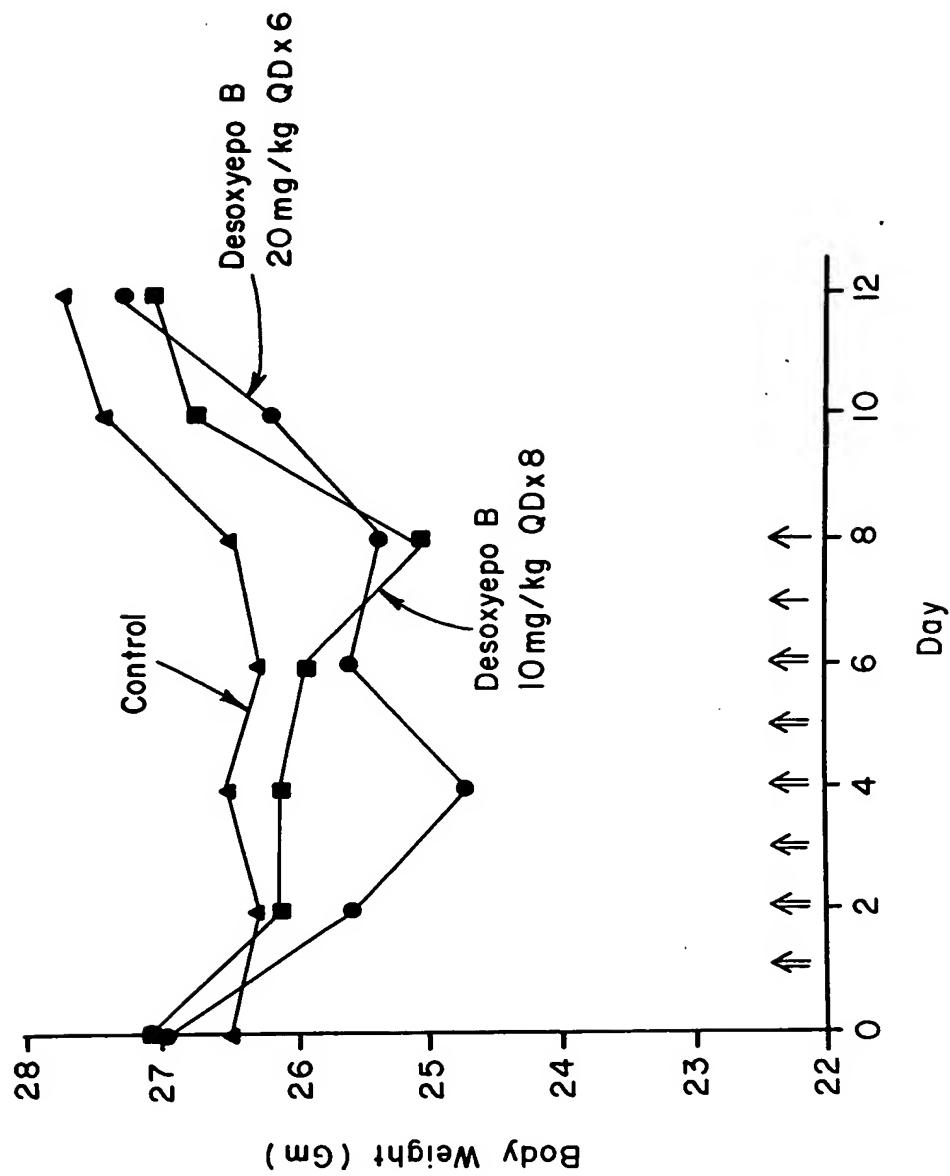
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FIG. 43B



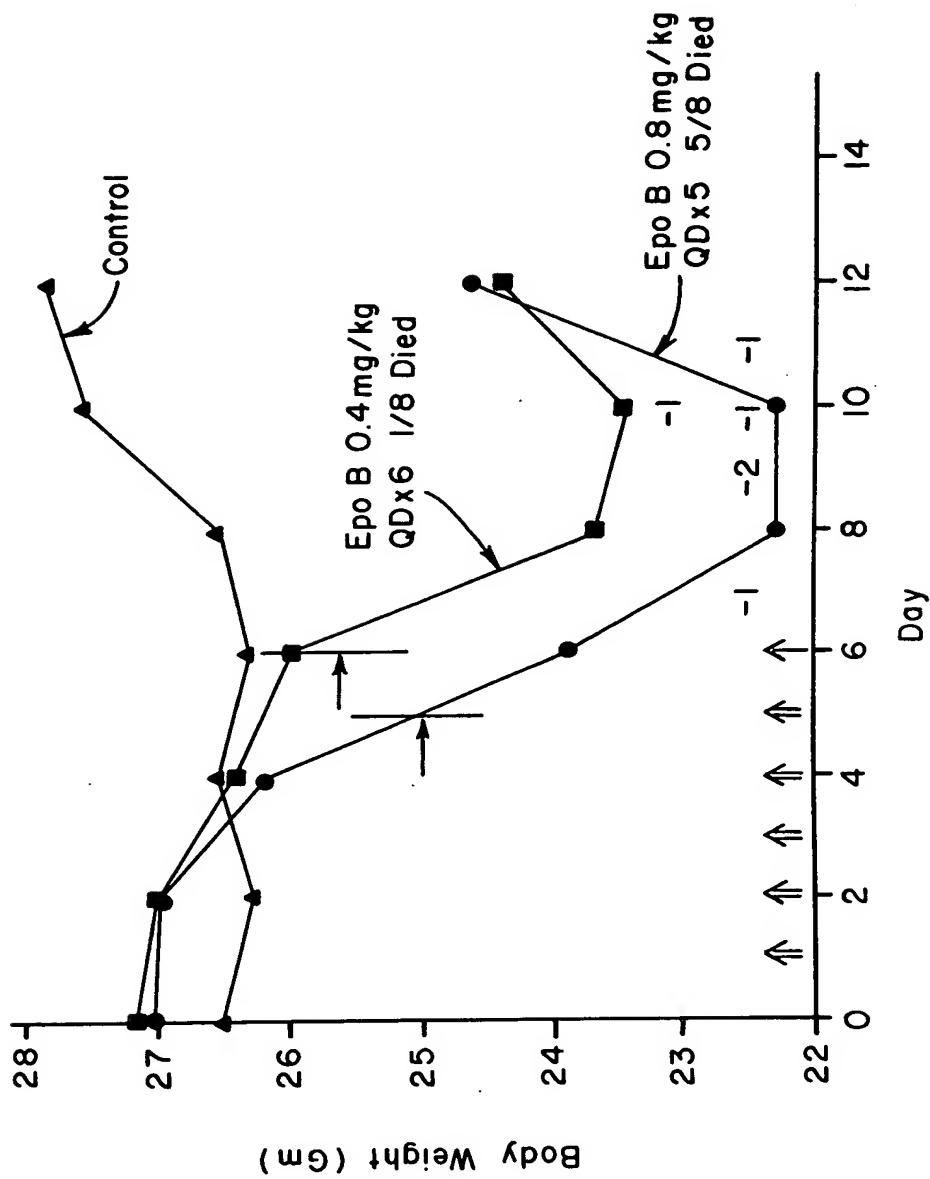
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FIG. 44A



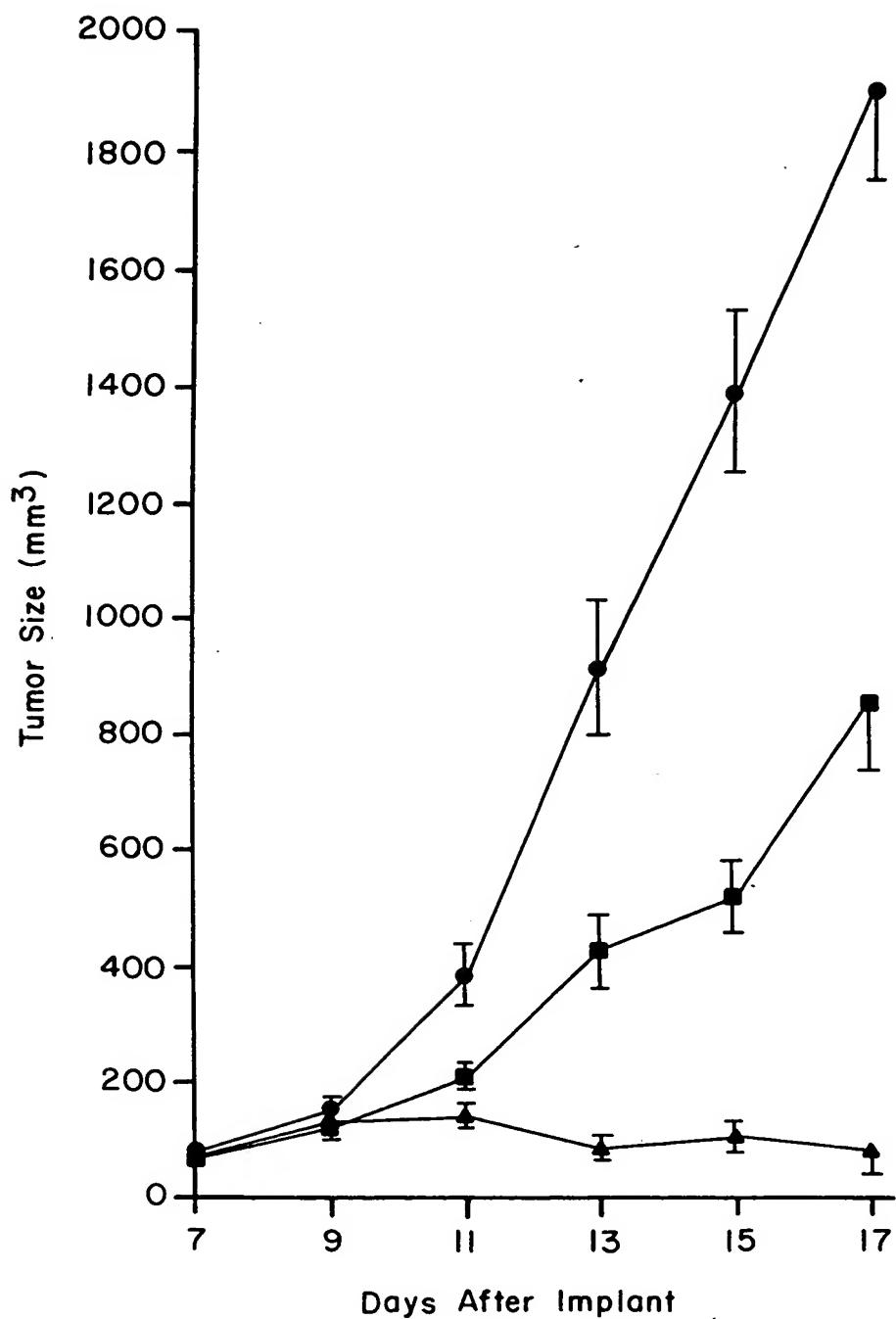
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FIG. 44 B



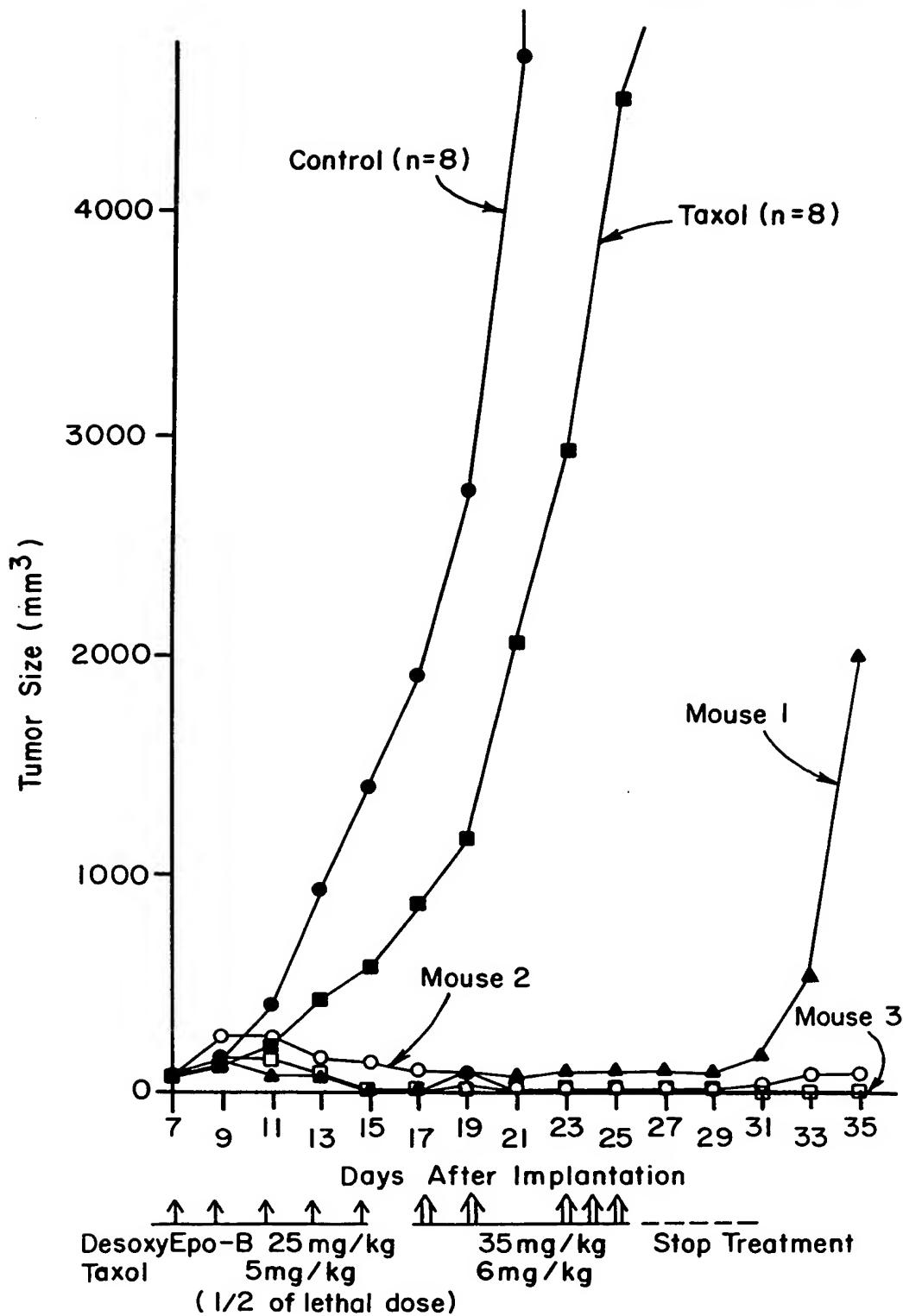
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FIG. 45A



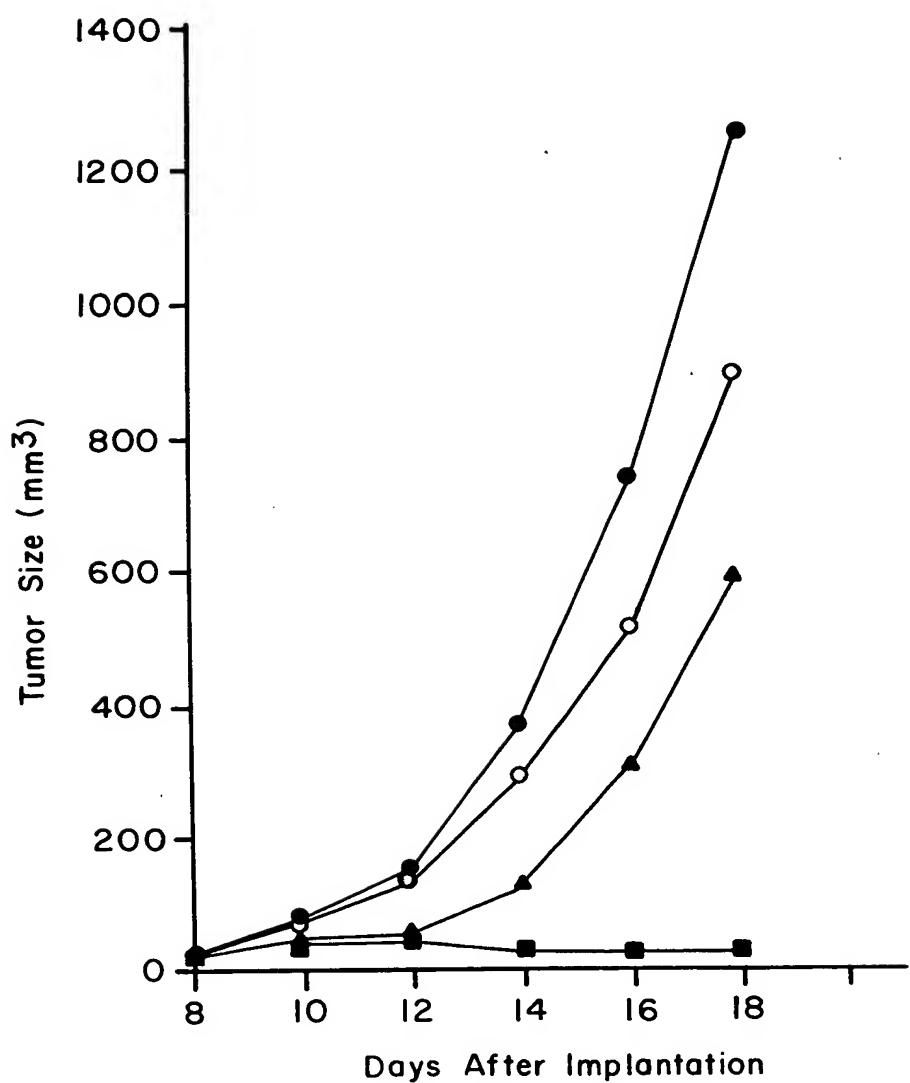
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FIG. 45 B



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FIG. 46



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FIG. 47

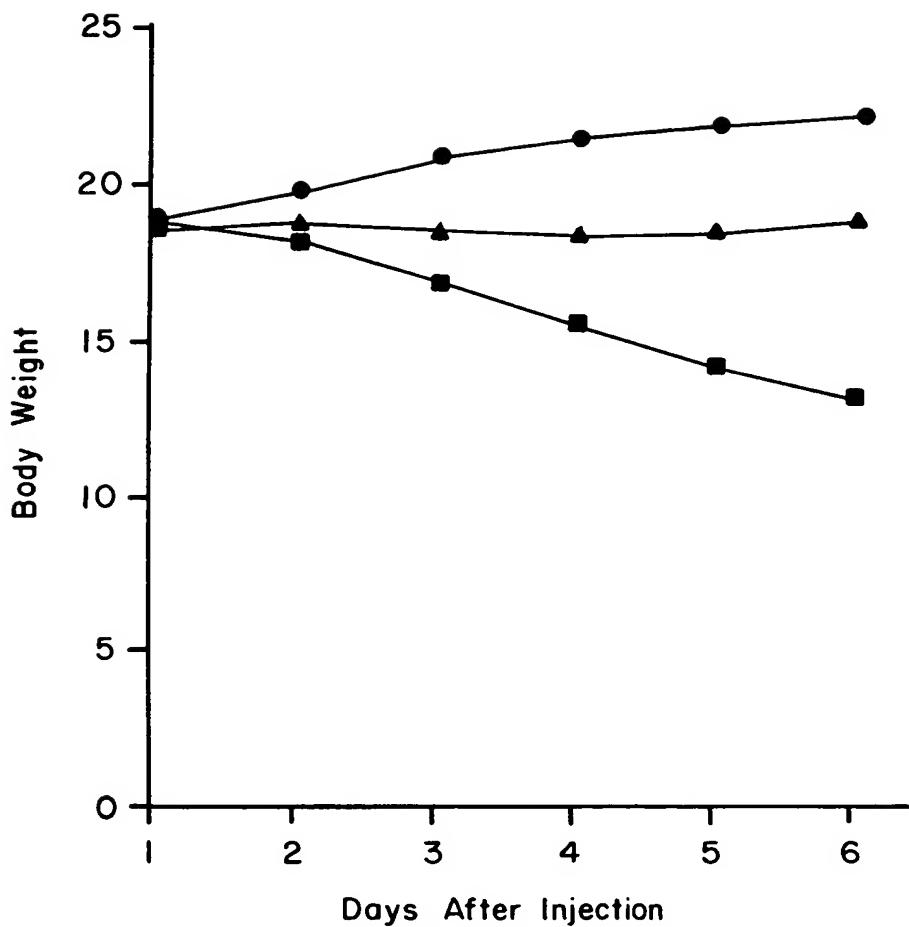
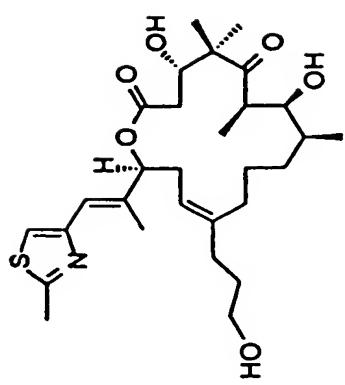
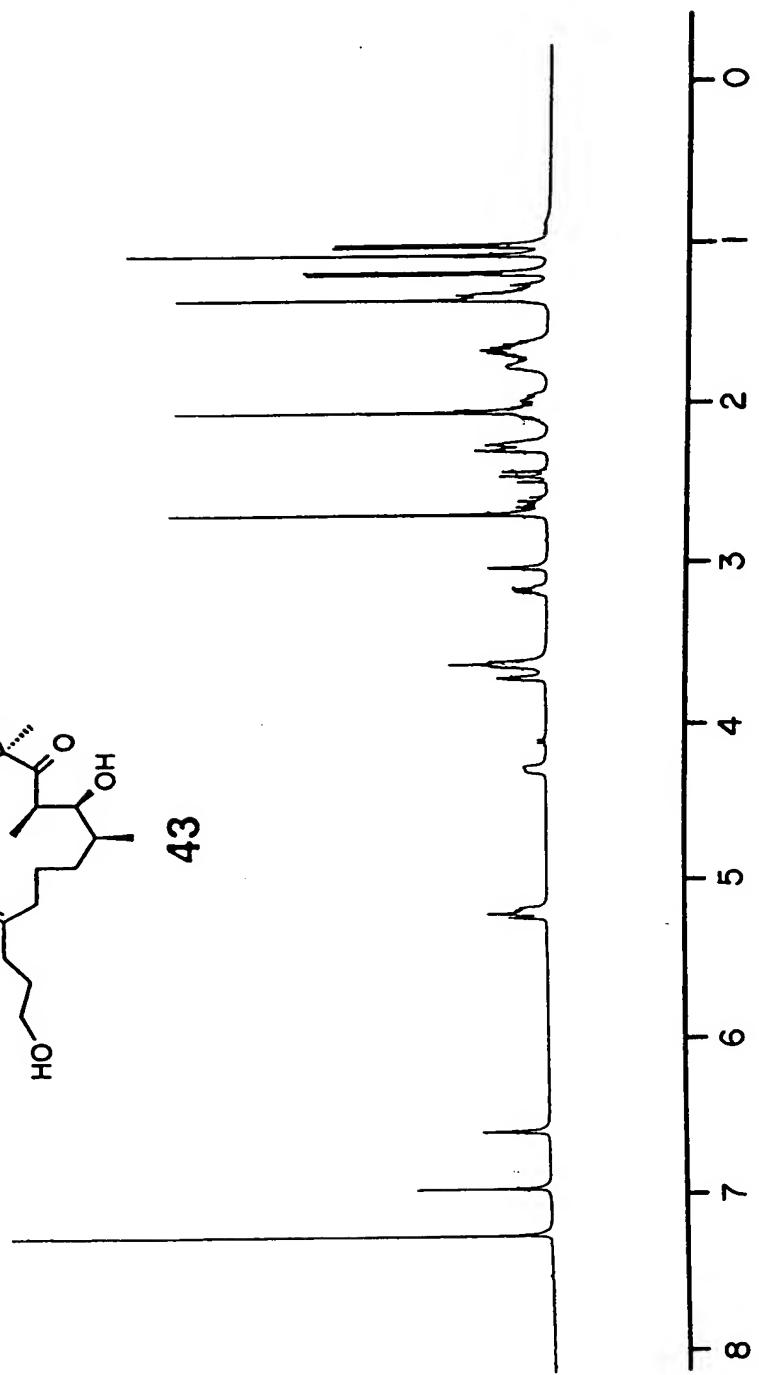


FIG. 48



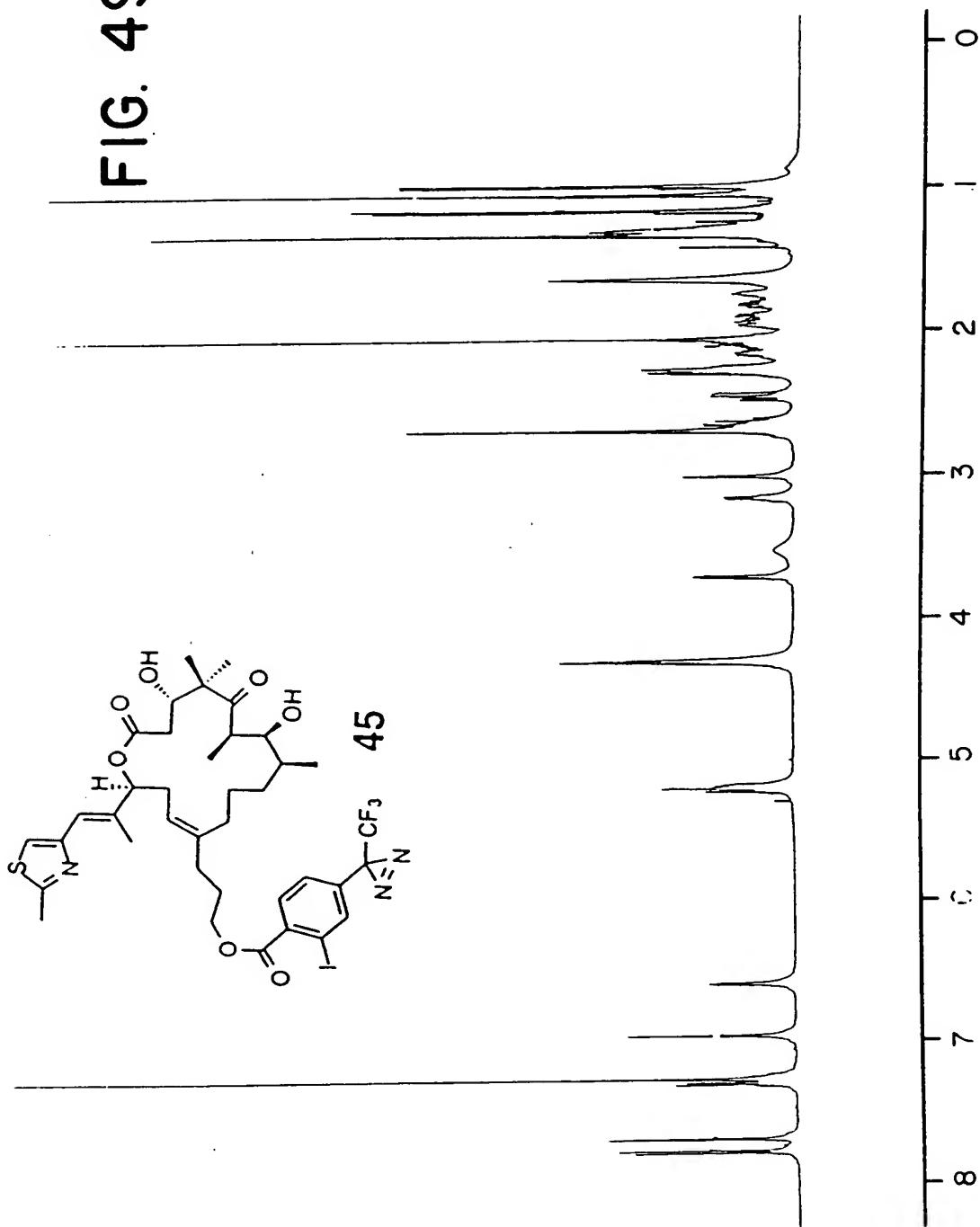
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FIG. 49



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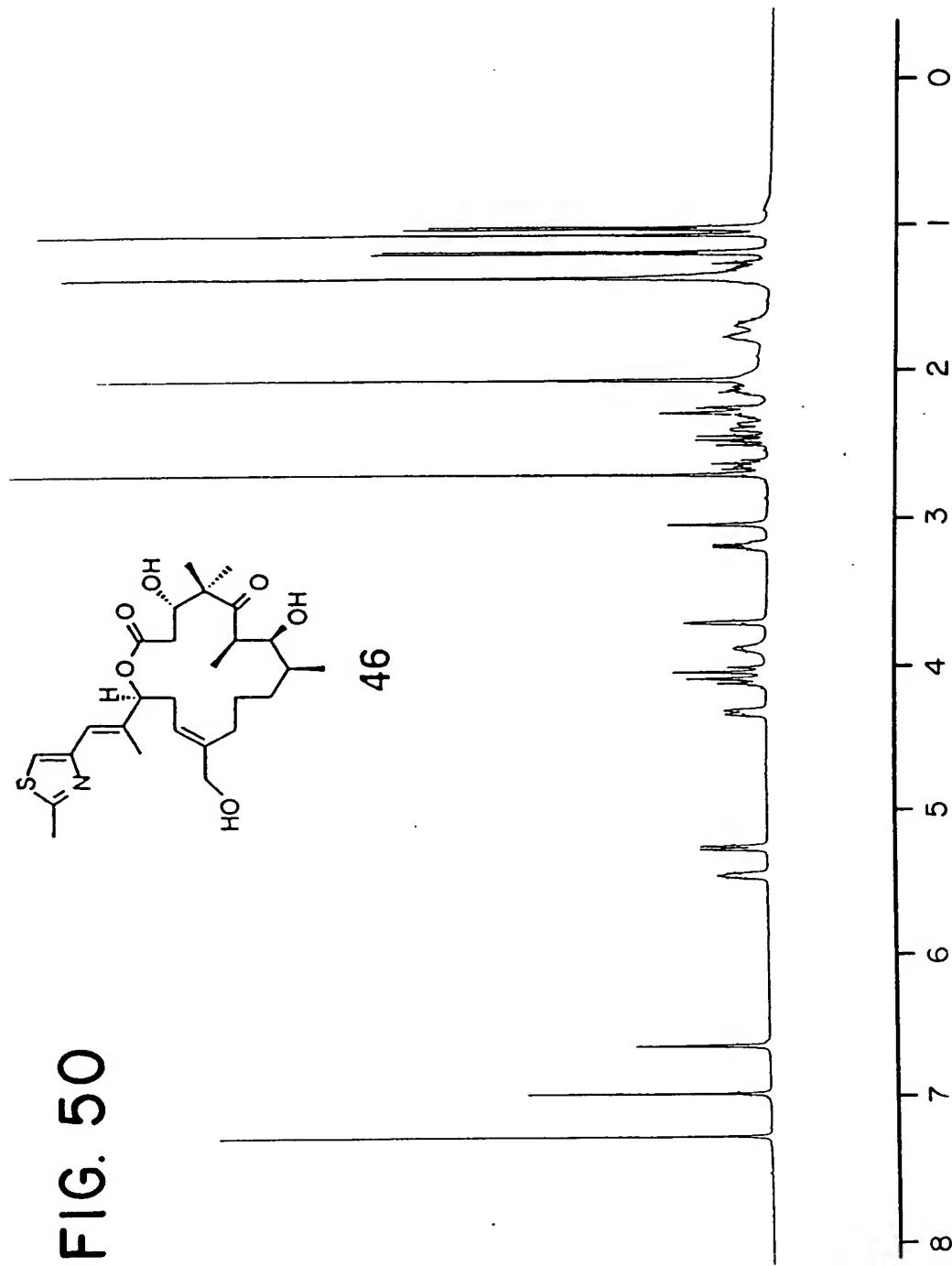
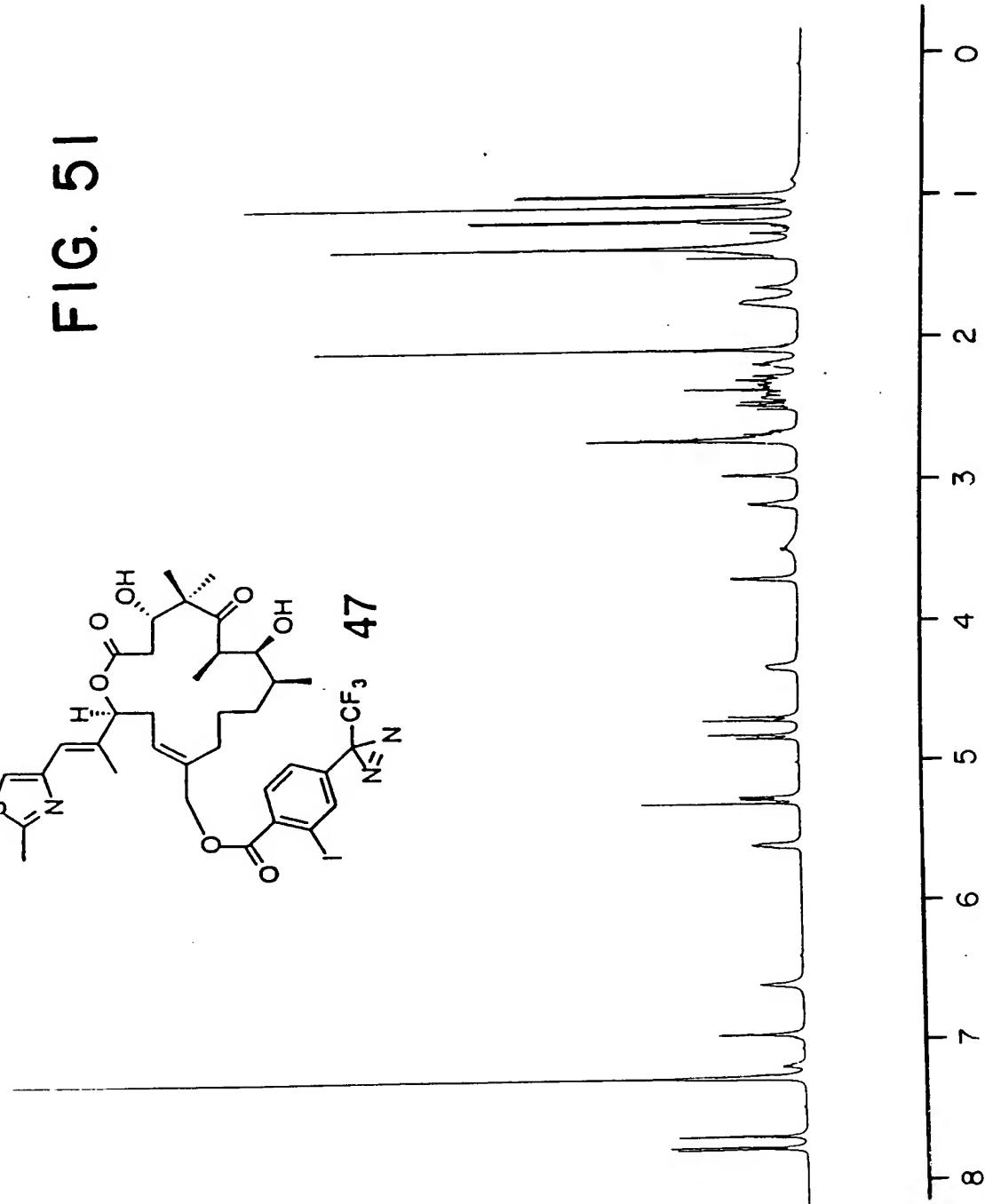
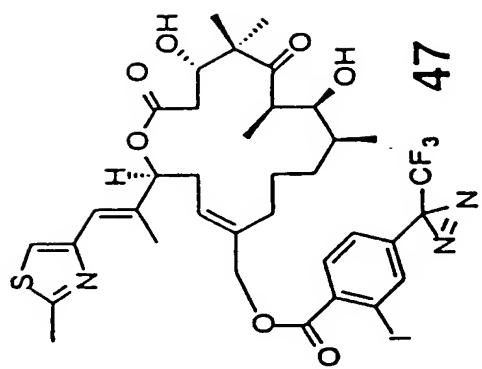


FIG. 50

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FIG. 51



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FIG. 52

